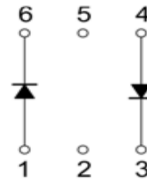
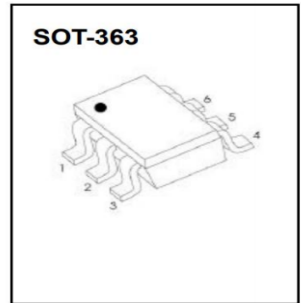




### Silicon Epitaxial Planar Diodes High Voltage Switching Diode

#### Features

- Fast switching speed
- Surface mount package ideally suited for automatic insertion



|         |         |         |         |
|---------|---------|---------|---------|
|         | BAS19DW | BAS20DW | BAS21DW |
| MARKING | JP      | JR      | JS      |

#### Absolute Maximum Ratings (T<sub>a</sub> = 25 °C)

| Parameter                                 | Symbol                            | Value             | Unit |
|---|-----------------------------------|-------------------|------|
| Repetitive Peak Reverse Voltage           | BAS19DW<br>BAS20DW<br>BAS21DW     | 120<br>200<br>250 | V    |
| Reverse Voltage                           | BAS19DW<br>BAS20DW<br>BAS21DW     | 100<br>150<br>200 | V    |
| Average Rectified Forward Current         | I <sub>F(AV)</sub>                | 200               | mA   |
| Forward Continuous Current                | I <sub>FM</sub>                   | 400               | mA   |
| Repetitive Peak Forward Current           | I <sub>FRM</sub>                  | 625               | mA   |
| Non-repetitive Peak Forward Surge Current | at t = 1 ms<br>at t = 1 s         | 2.5<br>0.5        | A    |
| Power Dissipation                         | P <sub>d</sub>                    | 250               | mW   |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>stg</sub> | - 65 to + 150     | °C   |

#### Characteristics at T<sub>a</sub> = 25 °C

| Parameter   | Symbol                        | Min.              | Max.              | Unit |
|---|-------------------------------|-------------------|-------------------|------|
| Forward Voltage<br>at I <sub>F</sub> = 100 mA<br>at I <sub>F</sub> = 200 mA   | V <sub>F</sub>                | -<br>-            | 1<br>1.25         | V    |
| Reverse Breakdown Voltage<br>at I <sub>R</sub> = 100 μA   | BAS19DW<br>BAS20DW<br>BAS21DW | 120<br>200<br>250 | -<br>-<br>-       | V    |
| Reverse Current<br>at V <sub>R</sub> = 100 V<br>at V <sub>R</sub> = 150 V<br>at V <sub>R</sub> = 200 V                            | BAS19DW<br>BAS20DW<br>BAS21DW | -<br>-<br>-       | 100<br>100<br>100 | nA   |
| Total Capacitance<br>at V <sub>R</sub> = 0, f = 1 MHz   | C <sub>T</sub>                | -                 | 5                 | pF   |
| Reverse Recovery Time<br>at I <sub>F</sub> = I <sub>R</sub> = 30 mA, I <sub>tr</sub> = 0.1I <sub>R</sub> , R <sub>L</sub> = 100 Ω | t <sub>rr</sub>               | -                 | 50                | ns   |



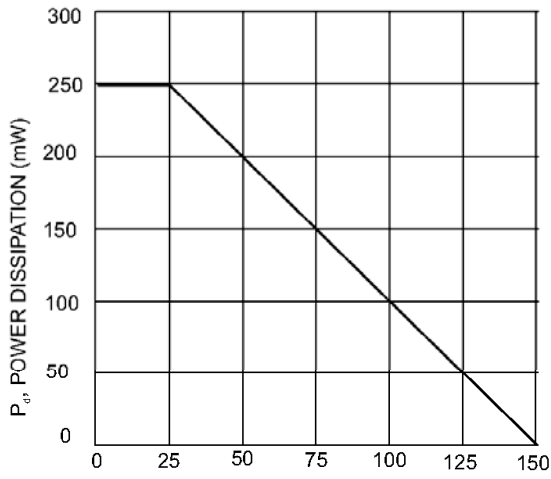
CHINA BASE INTERNATIONAL

# SOT-363

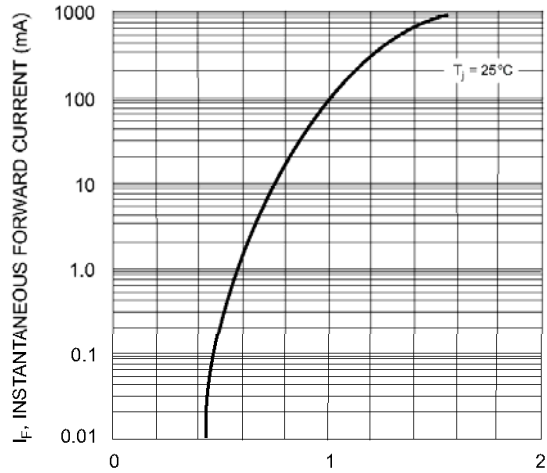


## BAS19DW/BAS20DW/BAS21DW

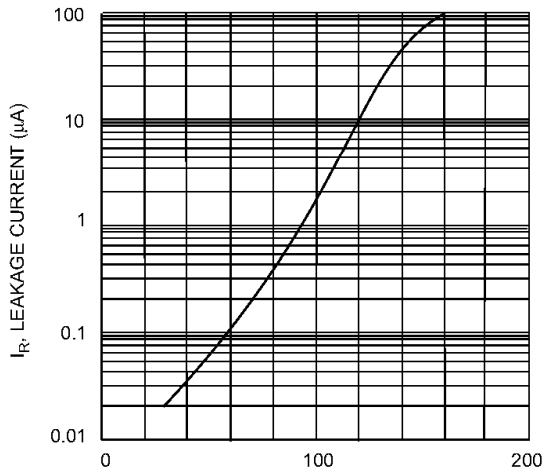
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T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



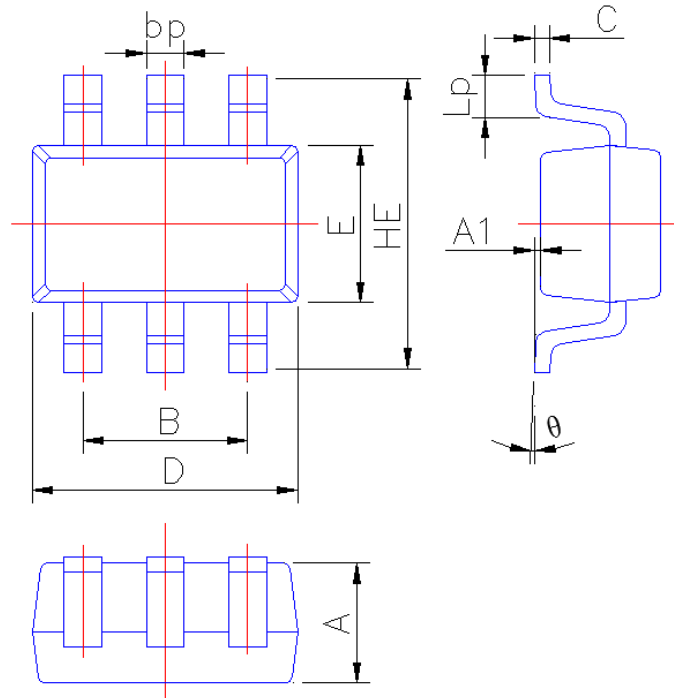
V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



T<sub>j</sub>, JUNCTION TEMPERATURE (°C)  
Fig. 3 Leakage Current vs Junction Temperature



### SOT-363 Package Outline Dimensions



| Symbol | Dimension in Millimeters |       |
|--------|--------------------------|-------|
|        | Min                      | Max   |
| A      | 0.90                     | 1.00  |
| A1     | 0.010                    | 0.100 |
| B      | 1.20                     | 1.40  |
| bp     | 0.25                     | 0.45  |
| C      | 0.09                     | 0.15  |
| D      | 2.00                     | 2.20  |
| E      | 1.15                     | 1.35  |
| HE     | 2.15                     | 2.55  |
| Lp     | 0.25                     | 0.46  |
| θ      | 0°                       | 6°    |