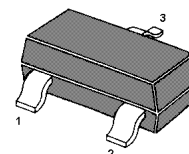
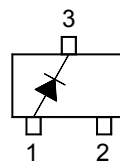


BAS19, BAS20, BAS21

Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes



Marking Code: **HC**
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit | |
|---|--|---------------|--------------------|---|
| Reverse Voltage | BAS19 BAS20 BAS21 | V_R | 120 200 250 | V |
| Continuous Forward Current | $I_{F(AV)}$ | 200 | mA | |
| Repetitive Peak Forward Current | I_{FRM} | 625 | mA | |
| Non-repetitive Peak Forward Surge Current | I_{FSM} | 0.5 2.5 | A | |
| | at $t = 1\text{ s}$ at $t = 1\text{ }\mu\text{s}$ | | | |
| Total Device Dissipation | P_{tot} | 350 | mW | |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 357 | $^\circ\text{C/W}$ | |
| Junction and Storage Temperature Range | T_j, T_{stg} | - 55 to + 150 | $^\circ\text{C}$ | |

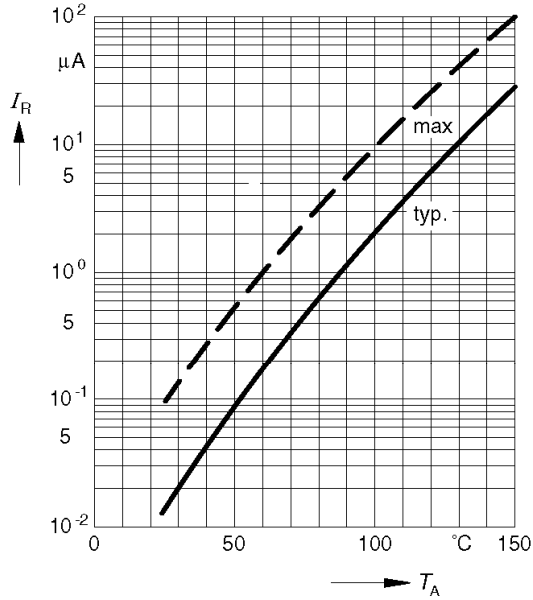
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|--|------------|------|------|---------------|
| Forward Voltage | V_F | - | 1 | V |
| at $I_F = 100\text{ mA}$ | | | | |
| at $I_F = 200\text{ mA}$ | | | 1.25 | V |
| Reverse Breakdown Voltage | $V_{(BR)}$ | 120 | - | V |
| at $I_R = 100\text{ }\mu\text{A}$ | BAS19 | | | |
| at $I_R = 100\text{ }\mu\text{A}$ | BAS20 | 200 | - | V |
| at $I_R = 100\text{ }\mu\text{A}$ | BAS21 | 250 | - | V |
| Reverse Current | I_R | - | 0.1 | μA |
| at $V_R = 100\text{ V}$ | BAS19 | | | |
| at $V_R = 150\text{ V}$ | BAS20 | - | 0.1 | μA |
| at $V_R = 200\text{ V}$ | BAS21 | - | 0.1 | μA |
| at $V_R = 100\text{ V}, T_j = 150\text{ }^\circ\text{C}$ | BAS19 | - | 100 | μA |
| at $V_R = 150\text{ V}, T_j = 150\text{ }^\circ\text{C}$ | BAS20 | - | 100 | μA |
| at $V_R = 200\text{ V}, T_j = 150\text{ }^\circ\text{C}$ | BAS21 | - | 100 | μA |
| Total Capacitance | C_{tot} | - | 5 | pF |
| at $V_R = 0, f = 1\text{ MHz}$ | | | | |
| Reverse Recovery Time | t_{rr} | - | 50 | ns |
| at $I_F = I_R = 30\text{ mA}, I_{R(REC)} = 3\text{ mA}, R_L = 100\text{ }\Omega$ | | | | |

BAS19, BAS20, BAS21

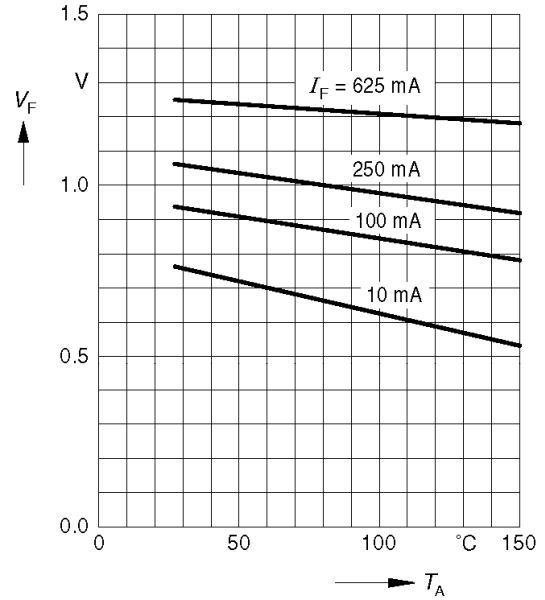
Reverse current $I_R = f(T_A)$

$V_R = 200V$



Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



Forward current $I_F = f(V_F)$

