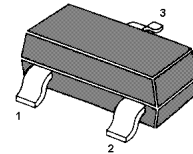
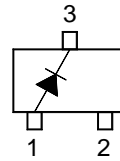


Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes


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

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

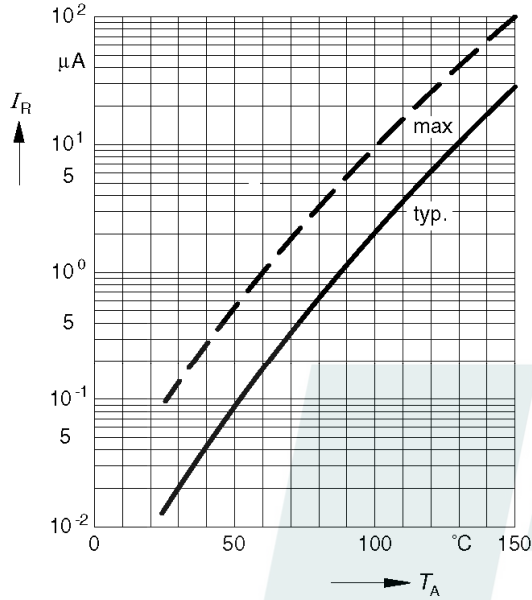
| Parameter | Symbol | Value | Unit | |
|---|--|-----------------|-------------------|--------------------|
| Reverse Voltage | BAS19 BAS20 BAS21 | V_R | 120 200 250 | V |
| Continuous Forward Current | | $I_{F(AV)}$ | 200 | mA |
| Repetitive Peak Forward Current | | I_{FRM} | 625 | mA |
| Non-repetitive Peak Forward Surge Current | at $t = 1\text{ s}$ at $t = 1\text{ }\mu\text{s}$ | I_{FSM} | 0.5 2.5 | A |
| 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 at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$ | V_F | - - | 1 1.25 | V V | |
| Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$ at $I_R = 100\text{ }\mu\text{A}$ at $I_R = 100\text{ }\mu\text{A}$ | BAS19 BAS20 BAS21 | $V_{(BR)}$ | 120 200 250 | - - - | V V V |
| Reverse Current at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$ at $V_R = 100\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 150\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 200\text{ V}, T_j = 150\text{ }^\circ\text{C}$ | BAS19 BAS20 BAS21 BAS19 BAS20 BAS21 | I_R | - - - 100 100 100 | 0.1 0.1 0.1 μA μA μA | |
| Total Capacitance at $V_R = 0, f = 1\text{ MHz}$ | C_{tot} | - | 5 | pF | |
| Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, I_{R(REC)} = 3\text{ mA}, R_L = 100\text{ }\Omega$ | t_{rr} | - | 50 | ns | |

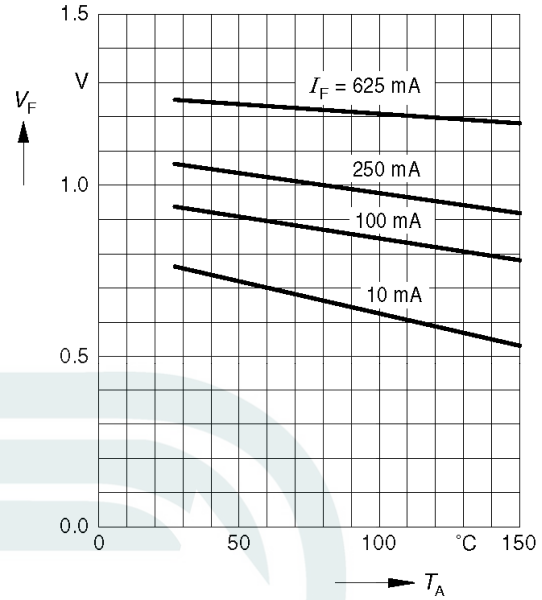
Reverse current $I_R = f(T_A)$

$V_R = 200V$

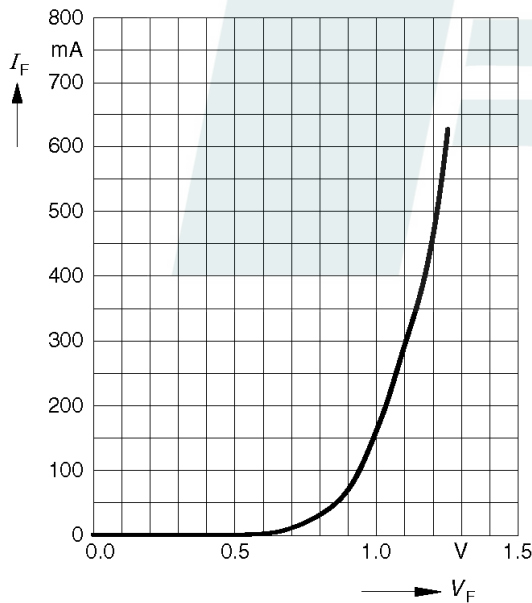


Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



Forward current $I_F = f(V_F)$



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