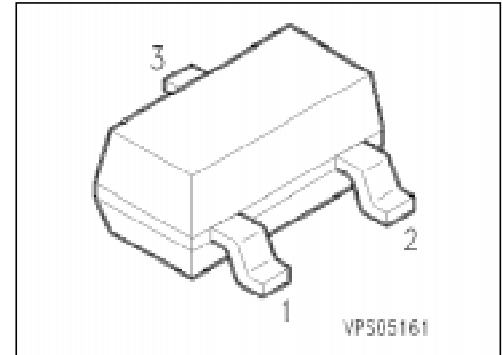


Silicon Schottky Diodes

BAS 40 ...

- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- Available with CECC quality assessment

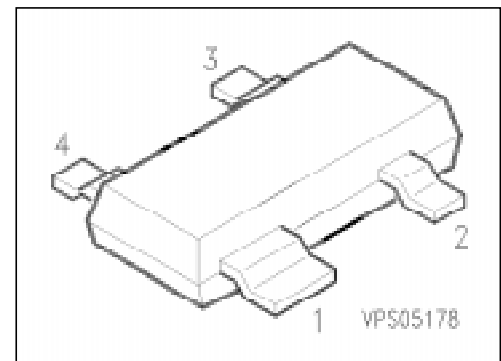


ESD: Electrostatic discharge sensitive device, observe handling precautions!

| Type | Marking | Ordering Code (tape and reel) | Pin Configuration | Package ¹⁾ |
|-------------|---------|-------------------------------|-------------------|-----------------------|
| ● BAS 40 | 43s | Q62702-D339 | | SOT-23 |
| ● BAS 40-04 | 44s | Q62702-D980 | | |
| ● BAS 40-05 | 45s | Q62702-D979 | | |
| ● BAS 40-06 | 46s | Q62702-D978 | | |

¹⁾ For detailed information see chapter Package Outlines.

- General-purpose diodes for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing
- ☞ Available with CECC quality assessment



ESD: Electrostatic discharge sensitive device, observe handling precautions!

| Type | Marking | Ordering Code (tape and reel) | Pin Configuration | Package ¹⁾ |
|-------------|---------|-------------------------------|-------------------|-----------------------|
| ☞ BAS 40-07 | 47s | Q62702-D1314 | | SOT-143 |

Maximum Ratings per Diode

| Parameter | Symbol | Values | Unit |
|--|-----------|----------------|------|
| Reverse voltage | V_R | 40 | V |
| Forward current | I_F | 120 | mA |
| Surge forward current, $t \leq 10$ ms | I_{FSM} | 200 | |
| Total power dissipation BAS 40 $T_s \leq 81$ °C BAS 40-04 ... $T_s \leq 55$ °C | P_{tot} | 250 | mW |
| Junction temperature | T_j | 150 | °C |
| Operating temperature range | T_{op} | - 55 ... + 150 | |
| Storage temperature range | T_{stg} | - 55 ... + 150 | |

Thermal Resistance

| | | | |
|---|-------------|--------------------------|-----|
| Junction - ambient ²⁾ BAS 40 BAS 40-04 ... | $R_{th JA}$ | ≤ 345 ≤ 515 | K/W |
| Junction - soldering point BAS 40 BAS 40-04 ... | $R_{th JS}$ | ≤ 275 ≤ 375 | |

¹⁾ For detailed information see chapter Package Outlines.

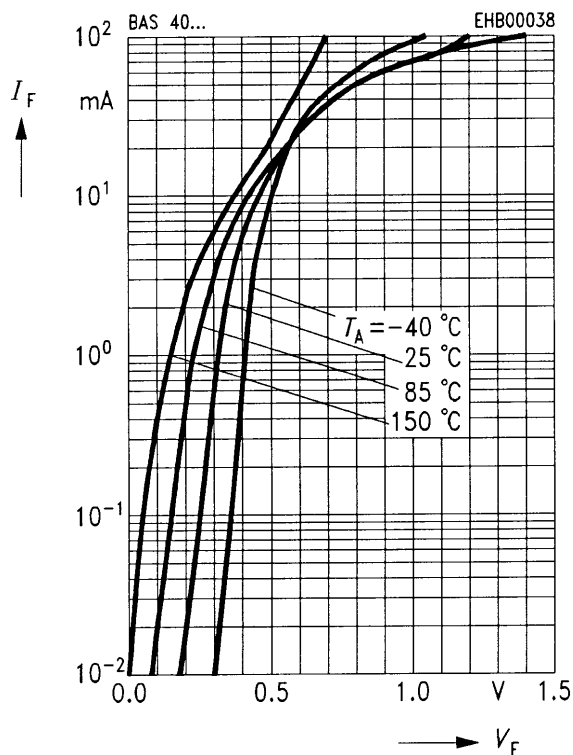
²⁾ Package mounted on epoxy pcb 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

Electrical Characteristics per Diode
 at $T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified.

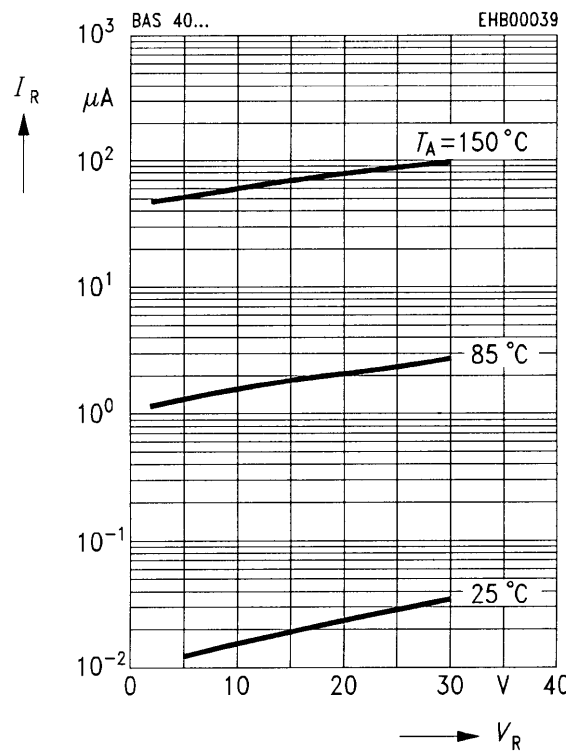
| Parameter | Symbol | Values | | | Unit |
|--|------------|-------------|-------------------|--------------------|---------------|
| | | min. | typ. | max. | |
| DC characteristics | | | | | |
| Breakdown voltage $I_R = 10\text{ }\mu\text{A}$ | $V_{(BR)}$ | 40 | – | – | V |
| Reverse current $V_R = 30\text{ V}$ $V_R = 40\text{ V}$ | I_R | – – | – – | 1 10 | μA |
| Forward voltage $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 40\text{ mA}$ | V_F | – – – | 310 450 720 | 380 500 1000 | mV |
| Diode capacitance $V_R = 0, f = 1\text{ MHz}$ | C_T | – | 4 | 5 | pF |
| Charge carrier life time $I_F = 25\text{ mA}$ | τ | – | – | 100 | ps |
| Differential forward resistance $I_F = 10\text{ mA}, f = 10\text{ kHz}$ | r_f | – | 10 | – | Ω |

Characteristics per Diode at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified.

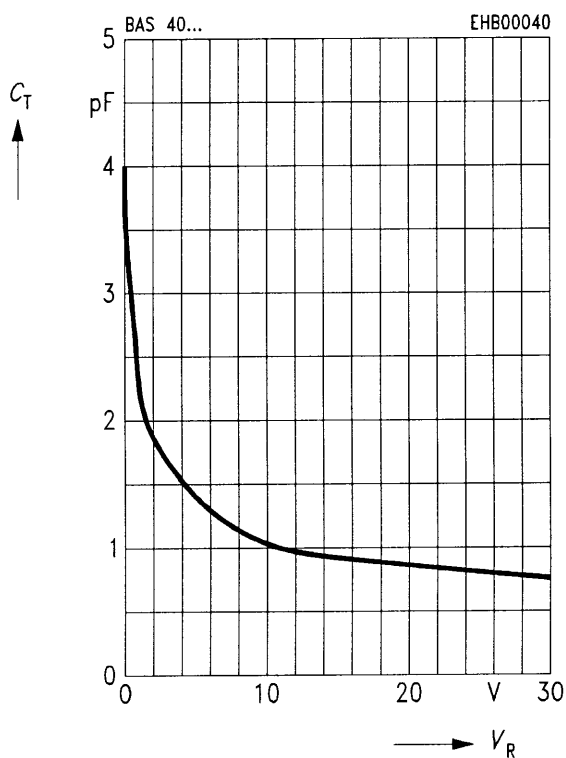
Forward current $I_F = f(V_F)$



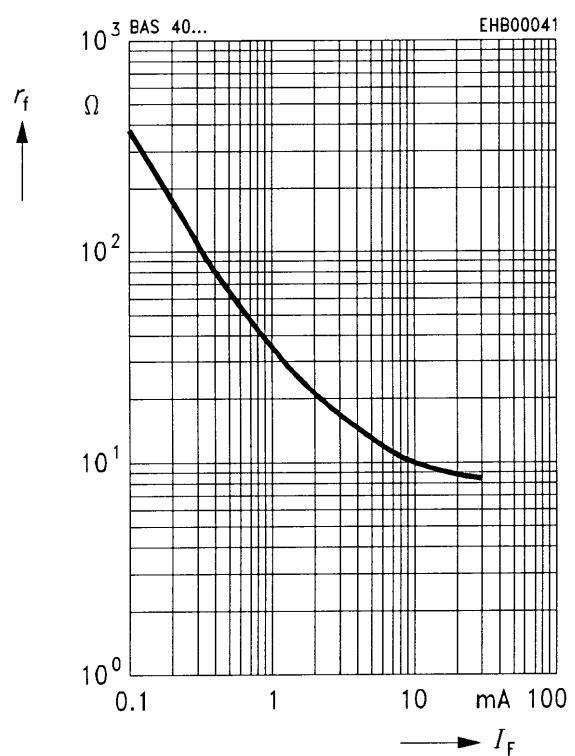
Reverse current $I_R = f(V_R)$



Diode capacitance $C_T = f(V_R)$
 $f = 1\text{ MHz}$

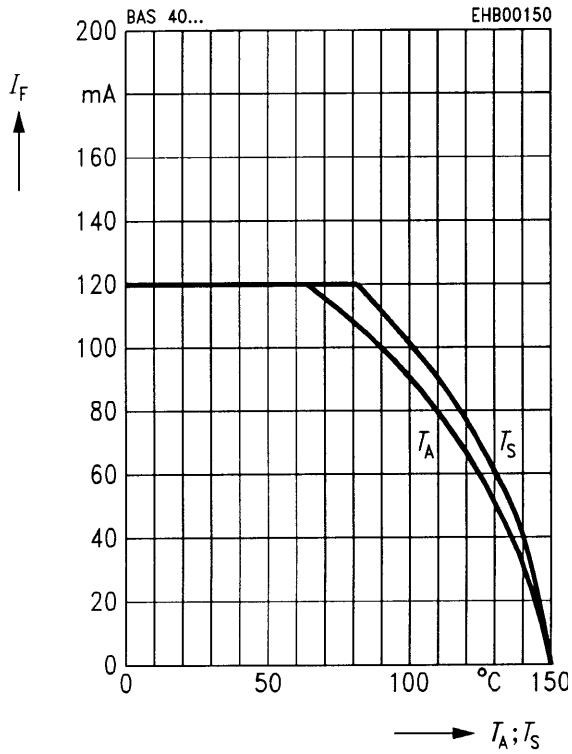


Differential forward resistance $r_f = f(I_F)$
 $f = 10\text{ kHz}$



Forward current $I_F = f(T_A^*; T_S)$

* Package mounted on epoxy



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www.datasheetcatalog.com

Datasheets for electronics components.