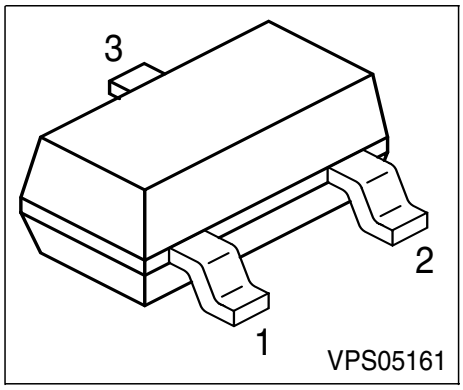
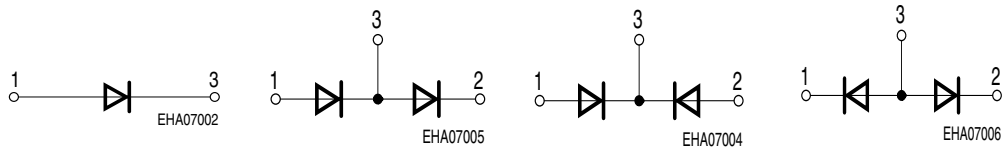
**Silicon Schottky Diodes**

- For low-loss, fast-recovery, meter protection, bias isolation and clamping applications
- Integrated diffused guard ring
- Low forward voltage




**BAS 125** **BAS 125-04** **BAS 125-05** **BAS 125-06**




**ESD**: **E**lectro**s**tatic **d**ischarge sensitive device, observe handling precaution!

| Type | Marking | Pin Configuration | | | Package |
|---|---|---|---|---|---|
| BAS 125 | 13s | 1 = A | 2 = n.c. | 3 = C | SOT-23 |
| BAS 125-04 | 14s | 1 = A1 | 2 = C2 | 3 = C1/A2 | SOT-23 |
| BAS 125-05 | 15s | 1 = A1 | 2 = A2 | 3 = C1/2 | SOT-23 |
| BAS 125-06 | 16s | 1 = C1 | 2 = C2 | 3 = A1/2 | SOT-23 |

**Maximum Ratings**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Diode reverse voltage | $V_R$ | 25 | V |
| Forward current | $I_F$ | 100 | mA |
| Surge forward current (t< 100µs) | $I_{FSM}$ | 500 | |
| Total power dissipation | $P_{tot}$ | | mW |
| $T_S$ = 59 °C BAS 125 | | 250 | |
| $T_S$ = 34 °C BAS 125-04 -05 -06 | | 250 | |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | -55 ... 150 | |

**Thermal Resistance**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Junction - ambient [1] BAS 125 | $R_{thJA}$ | ≤ 445 | K/W |
| Junction - ambient [1] BAS 125-04 -05 -06 | $R_{thJA}$ | ≤ 625 | |
| Junction - soldering point BAS 125 | $R_{thJS}$ | ≤ 365 | |
| Junction - soldering point BAS 125-04 -05 -06 | $R_{thJS}$ | ≤ 465 | |

**Electrical Characteristics** at $T_A$ = 25°C, unless otherwise specified

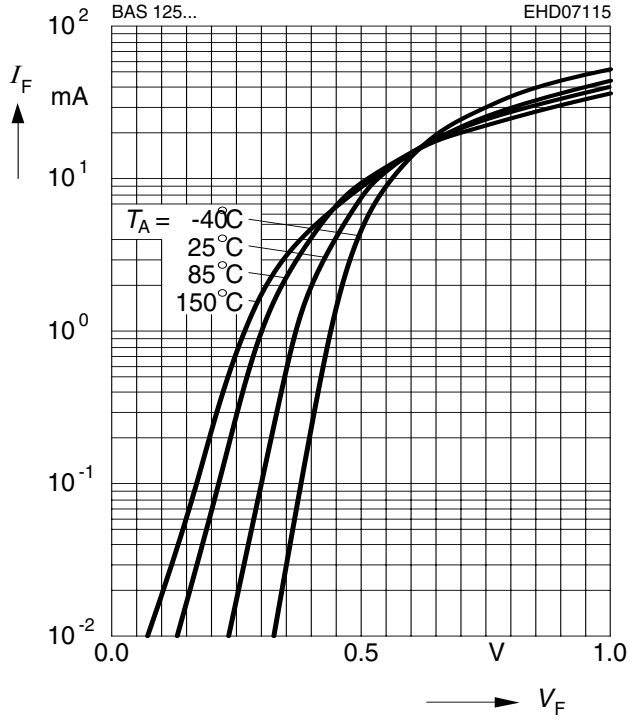
| Parameter | Symbol | Values | | | Unit |
|---|---|---|---|---|---|
| | | min. | typ. | max. | |
| **DC Characteristics** | | | | | |
| Reverse current | $I_R$ | | | | nA |
| $V_R$ = 20 V | | - | - | 100 | |
| $V_R$ = 25 | | - | - | 150 | |
| Forward voltage | $V_F$ | | | | mV |
| $I_F$ = 1 mA | | - | 385 | 400 | |
| $I_F$ = 10 mA | | - | 530 | 650 | |
| $I_F$ = 35 mA | | - | 800 | 950 | |
| **AC Characteristics** | | | | | |
| Diode capacitance<br>$V_R$ = 0 V, $f$ = 1 MHz | $C_T$ | - | - | 1.1 | pF |
| Differential forward resistance<br>$I_F$ = 5 mA, $f$ = 10 kHz | $R_F$ | - | 15 | - | Ω |
| Forward voltage matching [2]<br>$I_F$ = 10 mA | $\Delta V_F$ | - | - | 20 | mV |

1) Package mounted on alumina 15mm x 16.7mm x 0.7mm

2) $\Delta V_F$ is the difference between the lowest and the highest $V_F$ in the component

**Forward current** $I_F = f(V_F)$

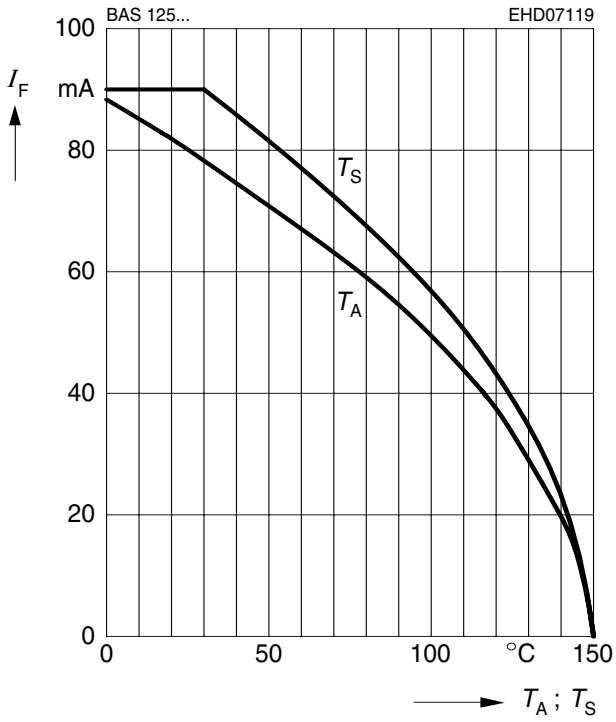
$T_A$ = Parameter




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

*Package mounted on alumina

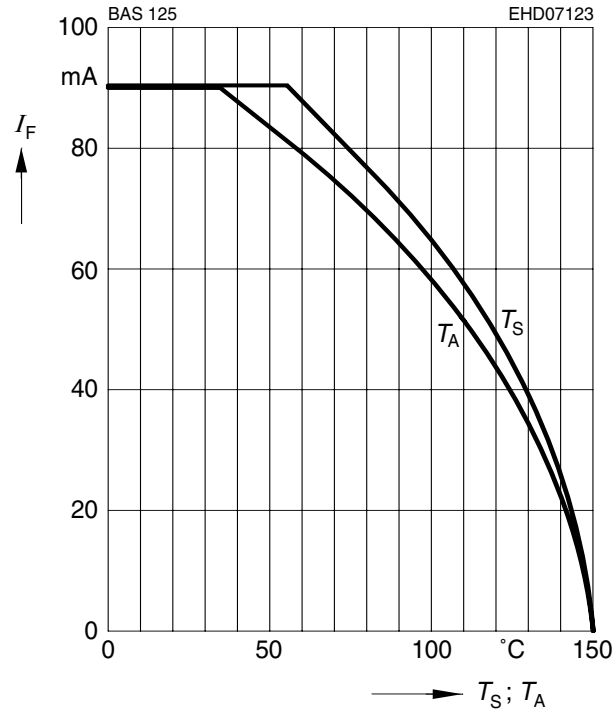
BAS 125-04, -05, -06




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

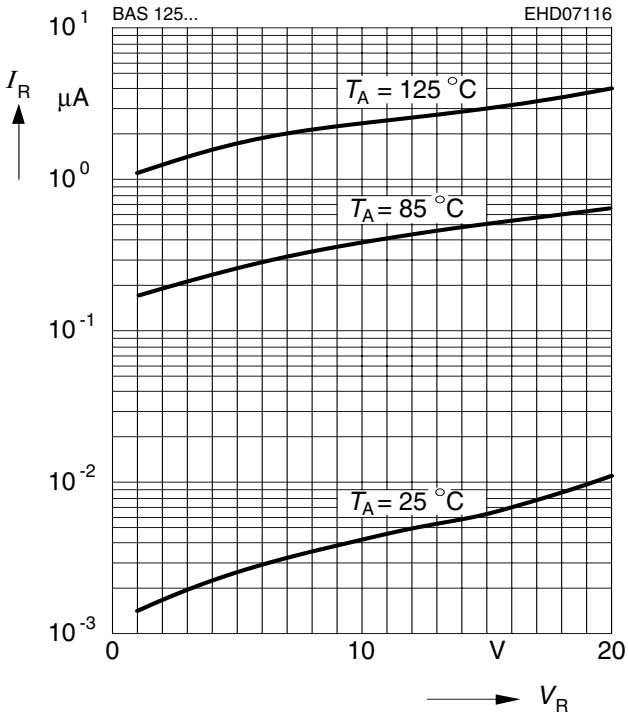
*Package mounted on alumina

BAS 125



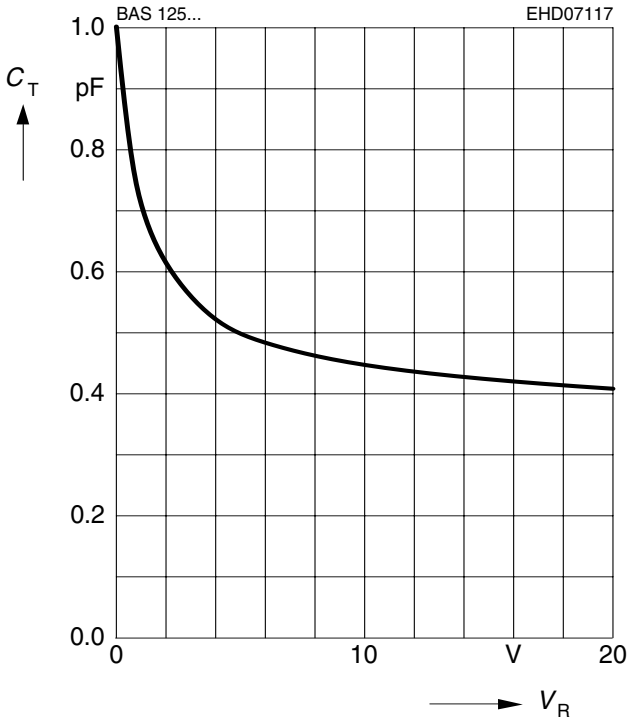

**Reverse current** $I_R = f(V_R)$

$T_A$ = Parameter



**Diode capacitance** $C_T = f(V_R)$

$f$ = 1MHz




**Differential forward resistance** $r_f = f(I_F)$

$f$ = 10 kHz