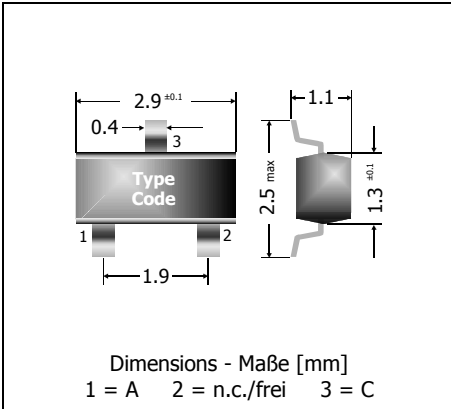


BAS19 ... BAS21
Fast Switching Surface Mount Si-Planar Diodes
Schnelle Si-Planar-Dioden für die Oberflächenmontage

Version 2011-07-13



| | |
|---|--------------------|
| Power dissipation – Verlustleistung | 250 mW |
| Repetitive peak reverse voltage Periodische Spitzenspernung | 120...250 V |
| Plastic case Kunststoffgehäuse | SOT-23 (TO-236) |
| Weight approx. – Gewicht ca. | 0.01 g |
| Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert | |
| Standard packaging taped and reeled Standard Lieferform gegurtet auf Rolle | |

Maximum ratings (T_A = 25°C)

Grenzwerte (T_A = 25°C)

| Type Typ | Continuous reverse voltage Dauerspernung V _R [V] | Repetitive peak reverse voltage Periodische Spitzenspernung V _{RRM} [V] ¹⁾ |
|-------------|---|--|
| BAS19 | 100 | 120 |
| BAS20 | 150 | 200 |
| BAS21 | 200 | 250 |

| | | |
|--|---|--|
| Power dissipation – Verlustleistung | P _{tot} | 250 mW ²⁾ |
| Max. average forward current (dc) Dauergrenzstrom | I _{FAV} | 200 mA ¹⁾ |
| Repetitive peak forward current Periodischer Spitzenstrom | I _{FRM} | 625 mA ¹⁾ |
| Non repetitive peak forward surge current Stoßstrom-Grenzwert | t _p ≤ 1 s t _p ≤ 1 μs | I _{FSM} I _{FSM} 0.5 A 2.5 A |
| Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur | T _j T _s | - 55...+150°C - 55...+150°C |

Characteristics (T_j = 25°C)

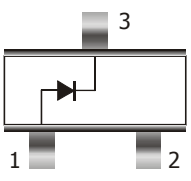
Kennwerte (T_j = 25°C)

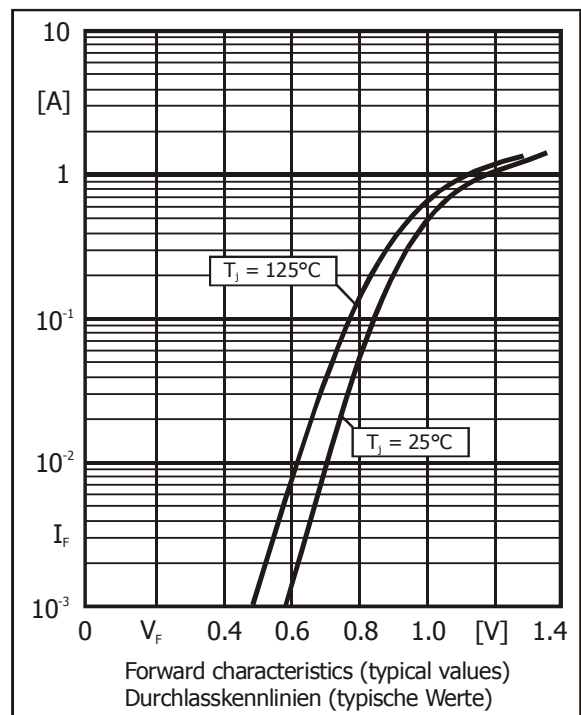
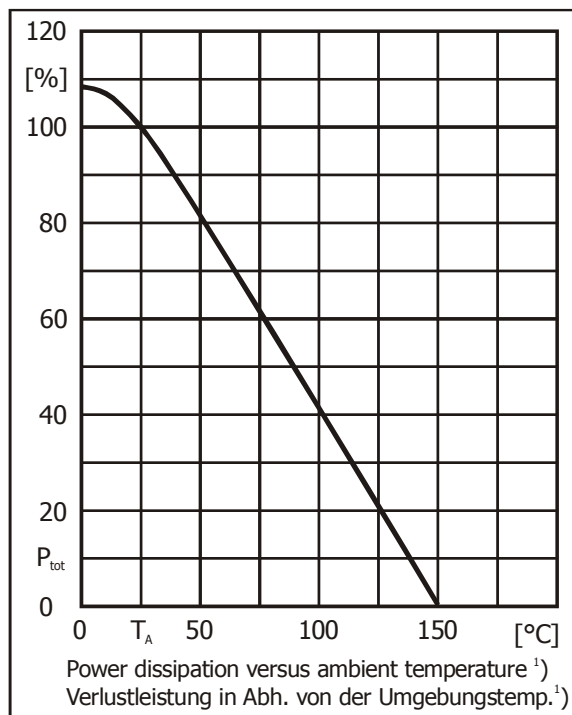
| | | | |
|---------------------------------------|--|----------------------------------|----------------------|
| Forward voltage Durchlass-Spannung | I _F = 100 mA I _F = 200 mA | V _F V _F | < 1.00 V < 1.25 V |
| Leakage current Sperrstrom | T _j = 25°C V = V _R | I _R | < 100 nA |
| | T _j = 150°C V = V _R | I _R | < 100 μA |

1 Tested with 100 μA pulses – Gemessen mit 100 μA-Impulsen
 2 Mounted on P.C. board with 3 mm² copper pad at each terminal
 Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluss

Characteristics ($T_j = 25^\circ\text{C}$)
Kennwerte ($T_j = 25^\circ\text{C}$)

| | | |
|--|-----------|-------------------------|
| Max. junction capacitance – Max. Sperrschichtkapazität $V_R = 0\text{ V}, f = 1\text{ MHz}$ | C_T | < 5 pF |
| Reverse recovery time – Sperrverzug $I_F = 10\text{ mA}$ über/through $I_R = 10\text{ mA}$ bis/to $I_R = 1\text{ mA}$ | t_{rr} | < 50 ns |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | R_{thA} | < 420 K/W ¹⁾ |

| Pinning – Anschlussbelegung | | Marking – Stempelung |
|---|--|----------------------|
|  | Single Diode Einzeldiode 1 = A 2 = n.c./frei 3 = C | HB or HC |



1 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluss