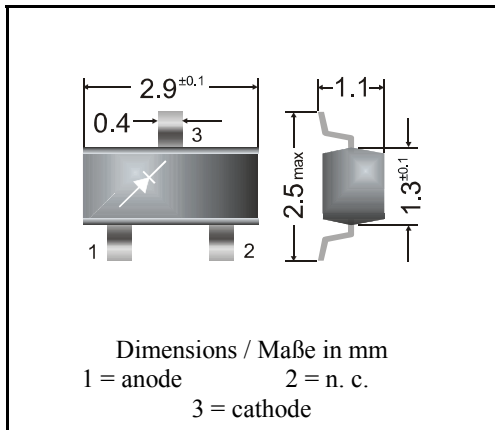


**Surface Mount Silicon Planar
Small-Signal Diode**

**Silizium-Planar-Diode
für die Oberflächenmontage**



| | |
|-------------------------------------------------------------------------------|-------------------------------|
| Nominal current – Nennstrom | 200 mA |
| Repetitive peak reverse voltage Periodische Spitzensperrspannung | 85 V |
| Plastic case Kunststoffgehäuse | SOT-23 (TO-236) |
| Weight approx. – Gewicht ca. | 0.01 g |
| Standard packaging taped and reeled Standard Lieferform gegurtet auf Rolle | see page 18 siehe Seite 18 |

Maximum ratings

Grenzwerte

| Type Typ | Working peak reverse voltage Arbeits-Spitzensperrspannung V_{RWM} [V] | Repetitive peak reverse voltage Periodische Spitzensperrspannung V_{RRM} [V] |
|-------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| BAS 19 | 100 | 120 |
| BAS 20 | 150 | 200 |
| BAS 21 | 200 | 250 |

| | | | | |
|--------------------------------------------------------------|--------------------------|----------------------------------------|-----------|----------------------|
| Max. average forward current Dauergrenzstrom | | $t_p < 0.3$ ms | I_{FAV} | 200 mA ¹⁾ |
| Repetitive peak forward current Periodischer Spitzenstrom | | $f > 15$ Hz | I_{FRM} | 625 mA ¹⁾ |
| Peak forward surge current Stoßstrom-Grenzwert | $T_j = 25^\circ\text{C}$ | $t_p = 1$ μs $t_p = 1$ s | I_{FSM} | 2.5 A 0.5 A |
| Max. power dissipation Verlustleistung | | $T_A = 25^\circ\text{C}$ | P_{tot} | 500 mW ¹⁾ |
| Operating junction temperature – Sperrschichttemperatur | | | T_j | - 50...+ 150°C |
| Storage temperature – Lagerungstemperatur | | | T_s | - 50...+ 150°C |

¹⁾ Mounted on P.C. board with 25 mm² copper pads at each terminal
 Montage auf Leiterplatte mit 25 mm² Kupferbelag (Löt-pad) an jedem Anschluß



Characteristics

Kennwerte

| | | | | |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------|-------------------------|
| Forward voltage Durchlaßspannung | $T_j = 25^\circ\text{C}$ | $I_F = 100\text{ mA}$ | V_F | < 1.0 mV |
| | | $I_F = 200\text{ mA}$ | V_F | < 1.25 mV |
| Leakage current Sperrstrom | $T_j = 25^\circ\text{C}$ | $V_R = V_{RRM}$ | I_R | < 100 nA |
| | $T_j = 150^\circ\text{C}$ | $V_R = V_{RRM}$ | I_R | < 100 μA |
| Junction capacitance Sperrschichtkapazität | | $V_F = V_R = 0\text{ V}$ $f = 1\text{ MHz}$ | C_{tot} | < 5 pF |
| Reverse recovery time Sperrverzug | $I_F = 10\text{ mA}$ über / through $I_R = 10\text{ mA}$ bis / to $I_R = 1\text{ mA}$, $U_R = 6\text{ V}$, $R_L = 100\ \Omega$ | | t_{rr} | < 50 ns |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | | | R_{thA} | < 420 K/W ¹⁾ |

