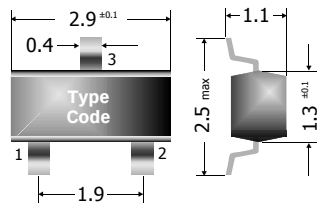
BAS19 ... BAS21

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

Version 2005-10-05



Dimensions - Maße [mm]
1 = A 2 = n.c./frei 3 = C

Power dissipation – Verlustleistung	250 mW
Repetitive peak reverse voltage Periodische Spitzensperrspannung	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 Dauersperrspannung V_R [V]	Repetitive peak reverse voltage Periodische Spitzensperrspannung V_{RRM} [V] [1]
BAS19	100	120
BAS20	150	200
BAS21	200	250

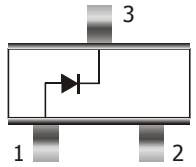
Power dissipation – Verlustleistung		P_{tot}	250 mW [2]
Max. average forward current (dc) Dauergrenzstrom		I_{FAV}	200 mA [1]
Repetitive peak forward current Periodischer Spitzenstrom		I_{FRM}	625 mA [1]
Non repetitive peak forward surge current Stoßstrom-Grenzwert	$t_p \le 1$ s $t_p \le 1$ µs	I_{FSM} I_{FSM}	0.5 A 2.5 A
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur		T_j T_S	- 55...+150°C - 55...+150°C

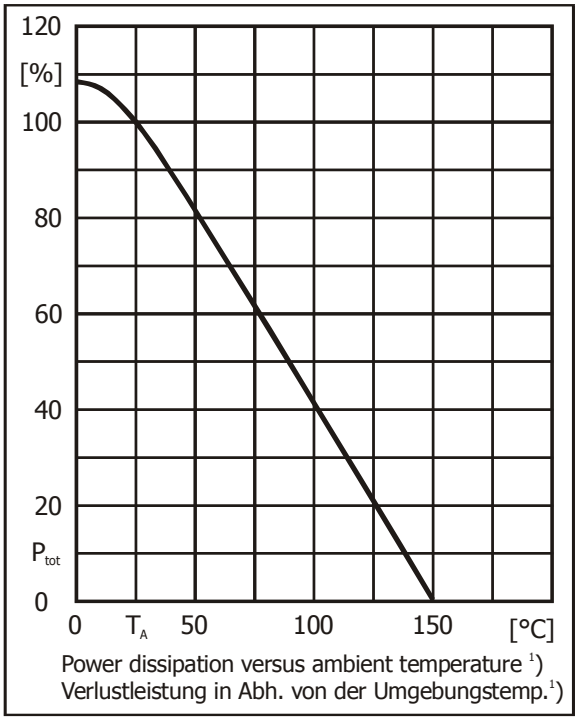
Characteristics (T_j = 25°C) **Kennwerte (T_j = 25°C)**

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

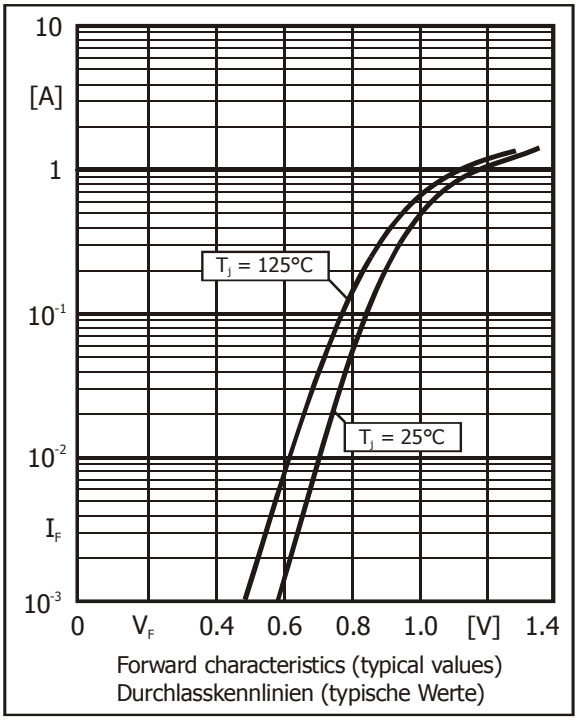
1 Tested with 100 µA pulses – Gemessen mit 100 µA-Impulsen
2 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluss

Characteristics (T_j = 25°C)		**Kennwerte (T_j = 25°C)**
Max. junction capacitance – Max. Sperrschichtkapazität V_R = 0 V, f = 1 MHz	C_T	< 5 pF
Reverse recovery time – Sperrverzug I_F = 10 mA über/through I_R = 10 mA bis/to I_R = 1 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	BAS19 = A8 or/oder JP BAS20 = A81 or/oder JR BAS21 = A82 or/oder JS



Power dissipation versus ambient temperature [1])
Verlustleistung in Abh. von der Umgebungstemp.[1])



Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)

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