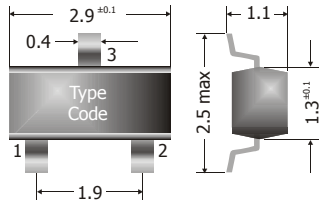
Diotec Semiconductor

BAV99

Surface Mount Small Signal Double-Diodes
Kleinsignal-Doppel-Dioden für die Oberflächenmontage

Version 2006-07-11



Dimensions - Maße [mm]
1 = A1 2 = C2 3 = C1/A2

Power dissipation – Verlustleistung	310 mW
Repetitive peak reverse voltage Periodische Spitzensperrspannung	70 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)**

per diode / pro Diode		BAV99	
Power dissipation – Verlustleistung [1]		P_{tot}	310 mW [2]
Max. average forward current – Dauergrenzstrom (dc)		I_{FAV}	200 mA [2]
Repetitive peak forward current – Periodischer Spitzenstrom		I_{FRM}	300 mA [2]
Non repetitive peak forward surge current Stoßstrom-Grenzwert	$t_p \le 1$ s $t_p \le 1$ ms $t_p \le 1$ µs	I_{FSM} I_{FSM} I_{FSM}	0.5 A 1 A 2 A
Repetitive peak reverse voltage – Periodische Spitzensperrspannung		V_{RRM}	85 V
Reverse voltage – Sperrspannung (dc)		V_R	70 V
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur		T_j T_S	-55...+150°C -55...+150°C

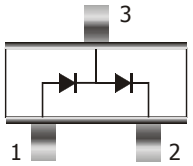
Characteristics (T_j = 25°C) **Kennwerte (T_j = 25°C)**

Forward voltage Durchlass-Spannung		I_F = 1 mA I_F = 10 mA I_F = 50 mA I_F = 150 mA	V_F V_F V_F V_F	< 715 mV < 855 mV < 1.0 V < 1.25 V
Leakage current [3] Sperrstrom	T_j = 25°C T_j = 25°C	V_R = 25 V V_R = 70 V	I_R I_R	< 30 nA < 2.5 µA
	T_j = 150°C T_j = 150°C	V_R = 25 V V_R = 70 V	I_R I_R	< 30 µA < 50 µA

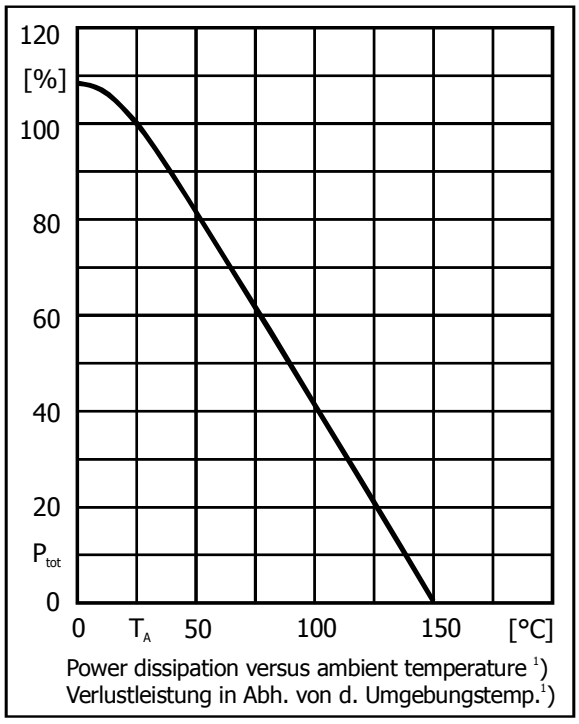
1 Total power dissipation of both diodes – Summe der Verlustleistungen beider Dioden
2 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluss
3 Tested with pulses t_p = 300 µs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 µs, Schaltverhältnis ≤ 2%

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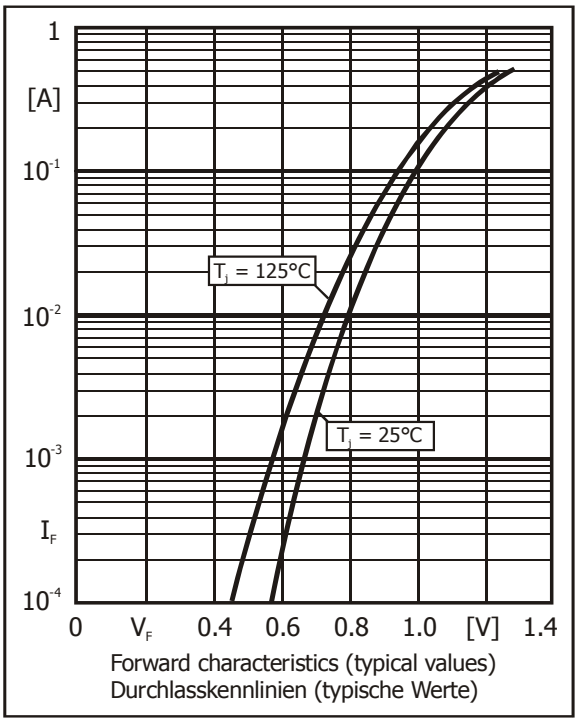
Characteristics (T_j = 25°C)		**Kennwerte (T_j = 25°C)**
Max. junction capacitance – Max. Sperrschichtkapazität V_R = 0 V, f = 1 MHz	C_T	1.5 pF
Reverse recovery time – Sperrverzug I_F = 10 mA über/through I_R = 10 mA bis/to I_R = 1 mA	t_{rr}	< 4 ns
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R_{thA}	< 400 K/W [1])

Pinning – Anschlussbelegung		Marking – Stempelung
	Double diode, series connection Doppeldiode, Reihenschaltung 1 = A1 2 = C2 3 = C1/A2	BAV99 = A7

Other available configurations – Andere lieferbare Konfigurationen	
Single diode – einzelne Diode	BAL99
Double diode, common cathode – Doppeldiode, gemeinsame Kathode	BAV70
Double diode, common anode – Doppeldiode, gemeinsame Anode	BAW56



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

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