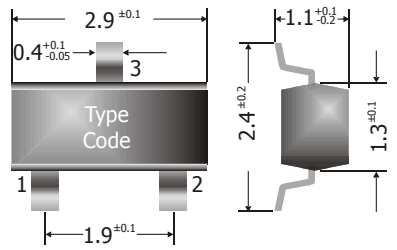
BAS40, BAS40-04, BAS40-05, BAS40-06

Surface Mount Schottky Barrier Single/Double Diodes
Schottky-Barrier Einzel-/Doppel-Dioden für die Oberflächenmontage

Version 2015-05-12



Dimensions - Maße [mm]

Power dissipation – Verlustleistung	310 mW
Repetitive peak reverse voltage Periodische Spitzensperrspannung	40 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)**

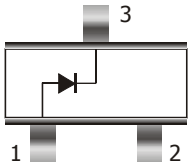
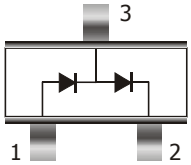
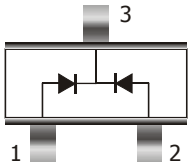
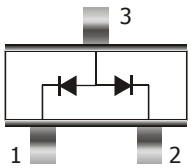
per diode / pro Diode		BAS40-series	
Power dissipation – Verlustleistung [1]		P_{tot}	310 mW [2]
Max. average forward current (dc) Dauergrenzstrom		I_{FAV}	200 mA [2]
Repetitive peak forward current Periodischer Spitzenstrom		I_{FRM}	300 mA [2]
Non repetitive peak forward surge current Stoßstrom-Grenzwert	$t_p \le 1$ s	I_{FSM}	0.6 A
Repetitive peak reverse voltage Periodische Spitzensperrspannung		V_{RRM}	40 V
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur		T_j T_S	-55...+150°C -55...+150°C

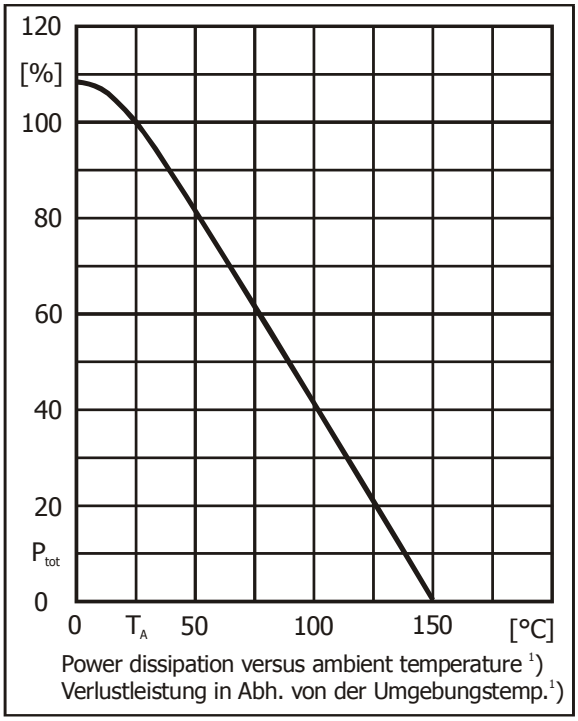
Characteristics (T_j = 25°C) **Kennwerte (T_j = 25°C)**

Forward voltage [3] Durchlass-Spannung [3]	I_F = 1 mA I_F = 10 mA I_F = 40 mA	V_F V_F V_F	< 380 mV < 500 mV < 1.00 V
Leakage current Sperrstrom	V_R = 30 V V_R = 40 V	I_R I_R	< 200 nA < 10 µA
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}	< 5 ns
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft		R_{thA}	< 400 K/W [2]

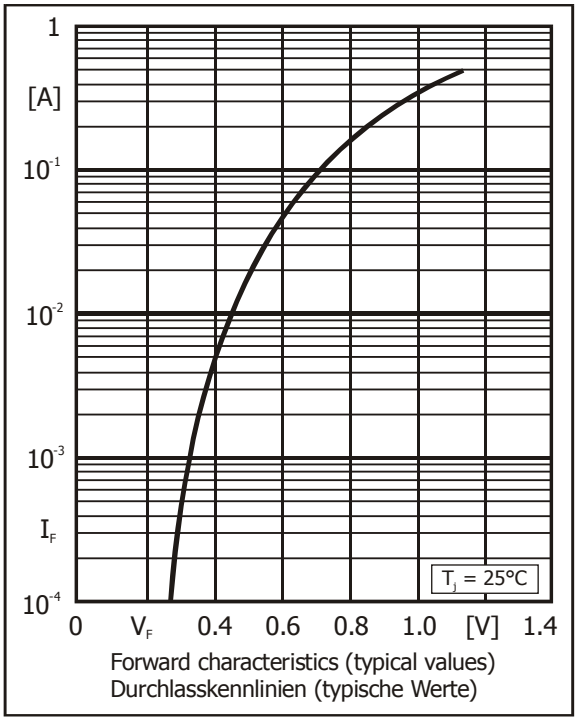
1 Total power dissipation of both diodes – Summe der Verlustleistungen beider Dioden
2 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluss
3 Tested with pulses tp = 300 µs, duty cycle ≤ 2% – Gemessen mit Impulsen tp =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

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Pinning – Anschlussbelegung		Marking – Stempelung
	Single Diode Einzeldiode 1 = A 2 = n.c./frei 3 = C	BAS40 = 43
	Dual diode, series connection Doppeldiode, Reihenschaltung 1 = A1 2 = C2 3 = C1/A2	BAS40-04 = 44
	Dual diode, common cathode Doppeldiode, gemeinsame Katode 1 = A1 2 = A2 3 = C1/C2	BAS40-05 = 45
	Dual diode, common anode Doppeldiode, gemeinsame Anode 1 = C1 2 = C2 3 = A1/A2	BAS40-06 = 46



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



Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)

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