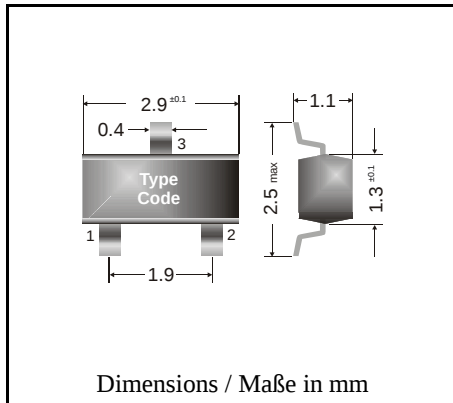


Surface mount Schottky-Barrier Single-/ Double-Diodes
Schottky-Barrier Einzel-/ Doppel-Dioden für die Oberflächenmontage

Version 2004-03-10



Power dissipation – Verlustleistung	310 mW
Repetitive peak reverse voltage	30 V
Periodische Spitzensperrspannung	
Plastic case	SOT-23
Kunststoffgehäuse	(TO-236)
Weight approx. – Gewicht ca.	0.01 g
Standard packaging taped and reeled	
Standard Lieferform gegurtet auf Rolle	

Maximum ratings ($T_A = 25^\circ\text{C}$)**Grenzwerte ($T_A = 25^\circ\text{C}$)**

per diode / pro Diode		BAT54, BAT54A, BAT54C, BAT54S
Max. average forward current (dc) Dauergrenzstrom	I_{FAV}	200 mA ¹⁾
Repetitive peak forward current Periodischer Spitzenstrom	I_{FRM}	300 mA ¹⁾
Peak forward surge current Stoßstrom-Grenzwert	$t_p \leq 10 \text{ ms}$ $t_p \leq 5 \mu\text{s}$ I_{FSM} I_{FSM}	1 A 8 A
Repetitive peak reverse voltage Periodische Spitzensperrspannung	V_{RRM}	30 V
Junction temperature – Sperrschichttemperatur	T_j	125°C
Storage temperature – Lagerungstemperatur	T_s	- 55...+ 150°C

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

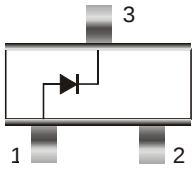
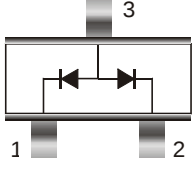
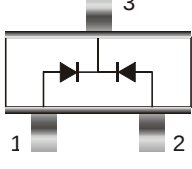
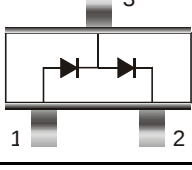
Forward voltage - Durchlaßspannung ²⁾	$I_F = 0.1 \text{ mA}$	V_F	< 240 mV
	$I_F = 1 \text{ mA}$	V_F	< 320 mV
	$I_F = 10 \text{ mA}$	V_F	< 400 mV
	$I_F = 30 \text{ mA}$	V_F	< 500 mV
	$I_F = 100 \text{ mA}$	V_F	< 1000 mV
Leakage current - Sperrstrom ²⁾	$V_R = 25 \text{ V}$	I_R	< 2 μA
	$V_R = 30 \text{ V}$	I_R	< 3 μA

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

²⁾ Tested with pulses $t_p = 300 \mu\text{s}$, duty cycle $\leq 2\%$ – Gemessen mit Impulsen $t_p = 300 \mu\text{s}$, Schaltverhältnis $\leq 2\%$

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

Max. junction Capacitance – Max. Sperrschichtkapazität $V_R = 1\text{ Vdc}$, $f = 1\text{ MHz}$	C_T	10 pF
Reverse recovery time - Sperrverzögerung $I_F = 10\text{ mA}$ über / through $I_R = 10\text{ mA}$ bis / to $I_R = 1\text{ mA}$	t_{rr}	< 5 ns
Critical rate of rise of voltage Kritische Spannungsanstiegsgeschwindigkeit	dv/dt	10000 V/ μs
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R_{thA}	420 K/W ¹⁾

Outline – Gehäuse	Pinning – Anschlußbelegung	Marking – Stempelung
	Single diode – Einzeldiode 1 = A 2 = n.c. 3 = K	BAT54 = L4 or / oder = KL1
	Double diode, common anode Doppeldiode, gemeins. Anode 1 = K1 2 = K2 3 = A1 / A2	BAT54A = L42 or / oder = KL2
	Double diode, common cathode Doppeldiode, gemeins. Katode 1 = A1 2 = A2 3 = K1 / K2	BAT54C = L43 or / oder = KL3
	Double diode, series connect. Doppeldiode, Reihenschaltung 1 = A1 2 = K2 3 = K1 / A2	BAT54S = L44 or / oder = KL4

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