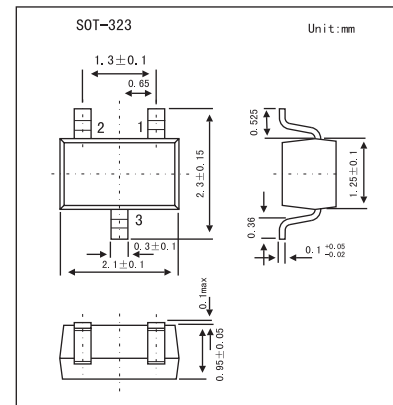


High-speed diode

BAL74W

■ Features

- Small plastic SMD package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Continuous reverse voltage: max. 85 V
- Repetitive peak forward current: max. 500 mA.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Max	Unit
repetitive peak reverse voltage	V_{RRM}			85	V
continuous reverse voltage	V_R			75	V
continuous forward current	I_F			175	mA
repetitive peak forward current	I_{FRM}			500	mA
non-repetitive peak forward current	I_{FSM}	square wave; $T_j = 25^\circ\text{C}$ prior to surge;			A
		$t = 1 \mu\text{s}$		4	
		$t = 1 \text{ms}$		1	
		$t = 1 \text{s}$		0.5	
total power dissipation	P_{tot}	$T_{amb} = 25^\circ\text{C}$		200	$^\circ\text{C}$
storage temperature	T_{stg}		-65	+150	$^\circ\text{C}$
junction temperature	T_j			150	mW
thermal resistance from junction to tie-point	$R_{th\ j-tp}$			300	K/W
thermal resistance from junction to ambient	$R_{th\ j-a}$			625	K/W

BAL74W■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Max	Unit
Forward voltage	V_F	$I_F = 1 \text{ mA}$	715	mV
		$I_F = 10 \text{ mA}$	855	
		$I_F = 50 \text{ mA}$	1	V
		$I_F = 150 \text{ mA}$	1.25	
Reverse current	I_R	$V_R = 25 \text{ V}$		nA
		$V_R = 75 \text{ V}$		μA
		$V_R = 25 \text{ V}, T_j = 150^\circ\text{C}$	0.1	μA
		$V_R = 75 \text{ V}, T_j = 150^\circ\text{C}$	100	μA
Diode capacitance	C_d	$f = 1.0 \text{ MHz}, V_R = 0$	1.5	pF
Reverse recovery time	t_{rr}	when switched from $I_F = 10 \text{ mA}$ to $I_R = 10 \text{ mA}$; $R_L = 100 \Omega$; measured at $I_R = 1 \text{ mA}$;	4	ns
Forward recovery voltage	V_{fr}	when switched from $I_F = 10 \text{ mA}$; $t_r = 20 \text{ ns}$;	1.75	V

■ Marking

Marking	JC
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