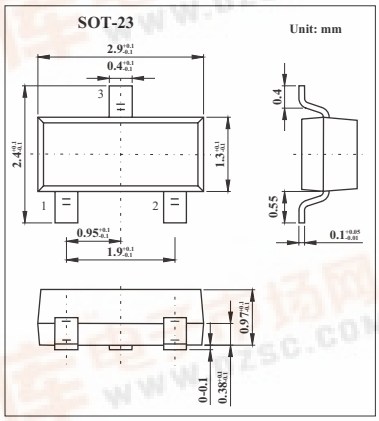
High-speed double diode

BAV74



Features

- Small plastic SMD package
- High switching speed: max.4 ns
- Continuous reverse voltage: max. 50 V
- Repetitive peak reverse voltage: max. 60 V
- Repetitive peak forward current: max. 450 mA

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Conditions	Min	Max	Unit
Repetitive peak reverse voltage	V_{RRM}			60	V
Continuous reverse voltage	V_R			50	V
Continuous forward current	I_F	single diode loaded; Note 1		215	mA
		double diode loaded; Note 1		125	
Repetitive peak forward current	I_{FRM}			450	mA
Non-repetitive peak forward current	I_{FSM}	square wave;T_j = 25℃ prior to surge; t = 1 μs t = 1 ms t = 1 s		 4 1 0.5	A
Total power dissipation	P_{tot}	T_{amb} = 25℃; Note 1		250	mW
Storage temperature	T_{stg}		-65	+150	℃
Junction temperature	T_j			150	℃
thermal resistance from junction to tie-point	$R_{th\ j\text{-}tp}$			360	K/W
thermal resistance from junction to ambient	$R_{th\ j\text{-}a}$			500	K/W

Note

1. Device mounted on an FR4 printed-circuit board.

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Conditions	Max	Unit
Forward voltage	V_F	I_F = 1 mA	715	mV
		I_F = 10 mA	855	mV
		I_F = 100 mA	1.0	V
Reverse current	I_R	V_R = 25 V	30	nA
		V_R = 50 V	0.1	μA
		V_R = 25 V; T_j = 150 ℃	30	μA
		V_R = 50 V; T_j = 150 ℃	100	μA
Diode capacitance	C_d	f = 1 MHz; V_R = 1 V;	1.5	pF
Reverse recovery time	t_{rr}	when switched from I_F =10mA to I_R = 10 mA; R_L = 100 Ω ; measured at I_R = 1 mA;	4	ns
Reverse recovery time	V_{fr}	when switched from I_F =10 mA; t_r = 2 0 ns;	1.75	V

■ Marking

Marking	JAp