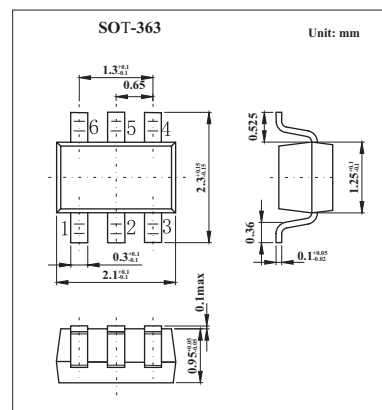


High-Speed Double Diode Array

BAV70S

■ Features

- Small plastic SMD package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Repetitive peak reverse voltage: max. 85 V
- Repetitive peak forward current: max. 450 mA.

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

Parameter	Symbol	Conditions	Min	Max	Unit
Per diode					
repetitive peak forward current	V_{RRM}			85	V
continuous reverse voltage	V_R			75	V
continuous forward current	I_F	single diode loaded;		250	mA
		all diodes loaded;		100	mA
repetitive peak forward current	I_{FRM}			450	mA
non-repetitive peak forward current	I_{FSM}	square wave; $T_j = 25^\circ\text{C}$ prior to surge;		4	A
		$t = 1\ \mu\text{s}$		1	
		$t = 1\ \text{ms}$		0.5	
total power dissipation	P_{tot}	$T_s = 60^\circ\text{C}$; note 1		350	mW
storage temperature	T_{stg}		-65	+150	$^\circ\text{C}$
junction temperature	T_j		-65	+150	$^\circ\text{C}$
thermal resistance from junction to ambient	$R_{th\ j-a}$			255	K/W

Note

1. One or more diodes loaded.

BAV70S■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Max	Unit
forward voltage	V_F	$I_F = 1\text{ mA}$	200	mV
		$I_F = 10\text{ mA}$	260	
		$I_F = 50\text{ mA}$	340	
		$I_F = 150\text{ mA}$	420	
reverse current	I_R	$V_R = 25\text{ V}$	30	nA
		$V_R = 75\text{ V}$	2.5	$\mu\text{ A}$
		$V_R = 25\text{ V}; T_j = 150^\circ\text{C}$	60	$\mu\text{ A}$
		$V_R = 75\text{ V}; T_j = 150^\circ\text{C}$	100	$\mu\text{ A}$
diode capacitance	C_d	$V_R = 0; f = 1\text{ MHz};$	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	A4t
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