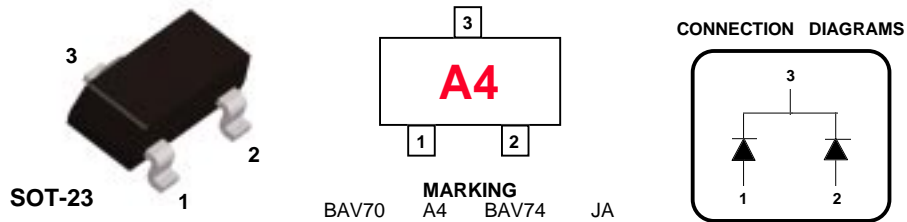


BAV70 / 74



High Conductance Ultra Fast Diode

Sourced from Process 1P. See BAV99 for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W _{IV}	Working Inverse Voltage	BAV70	70 V
		BAV74	50 V
I _O	Average Rectified Current	200	mA
I _F	DC Forward Current	600	mA
i _f	Recurrent Peak Forward Current	700	mA
i _{f(surge)}	Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	1.0	A
		2.0	A
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature	150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BAV70/74	
P _D	Total Device Dissipation Derate above 25°C	350	mW
		2.8	mW/°C
R _{θJA}	Thermal Resistance, Junction to Ambient	357	°C/W

High Conductance Ultra Fast Diode

(continued)

BAV70 / BAV74

Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter		Test Conditions	Min	Max	Units
B _V	Breakdown Voltage	BAV70	I _R = 100 μA	70		V
		BAV74	I _R = 100 μA	50		V
I _R	Reverse Current	BAV70	V _R = 25 V, T _A = 150°C		60	μA
			V _R = 70 V		5.0	μA
		BAV74	V _R = 70 V, T _A = 150°C		100	μA
			V _R = 50 V		100	nA
			V _R = 50 V, T _A = 150°C		100	μA
V _F	Forward Voltage	BAV70	I _F = 1.0 mA		715	mV
			I _F = 10 mA		855	mV
			I _F = 50 mA		1.0	V
			I _F = 150 mA		1.25	V
		BAV74	I _F = 100 mA		1.0	V
C _O	Diode Capacitance	BAV70	V _R = 0, f = 1.0 MHz		1.5	pF
		BAV74	V _R = 0, f = 1.0 MHz		2.0	pF
T _{RR}	Reverse Recovery Time	BAV70	I _F = I _R = 10 mA, I _{RR} = 1.0 mA, R _L = 100Ω		6.0	nS
		BAV74	I _F = I _R = 10 mA, I _{RR} = 1.0 mA, R _L = 100Ω		4.0	nS
Q _S	Stored Charge	BAV70	I _F = 10 mA		45	pC

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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