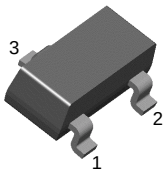
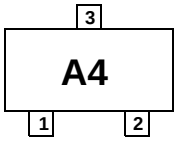
FAIRCHILD
SEMICONDUCTOR®

BAV70 / 74

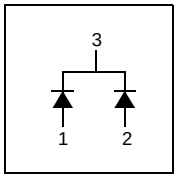


SOT-23



MARKING
BAV70 A4 BAV74 JA

Connection Diagram



Small Signal Diode

Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	BAV70	70	V
		BAV74	50	V
$I_{F(AV)}$	Average Rectified Forward Current		200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current			
	Pulse Width = 1.0 second		1.0	A
	Pulse Width = 1.0 microsecond		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 the diode may be impaired.

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

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter		Test Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	BAV70	I_R = 100µA	75		V
		BAV74	I_R = 5.0µA	50		V
V_F	Forward Voltage	BAV70	I_F = 1.0mA		715	mV
			I_F = 10mA		855	mV
			I_F = 50mA		1.0	V
			I_F = 150mA		1.25	V
		BAV74	I_F = 100mA		1.0	V
I_R	Reverse Leakage	BAV70	V_R = 25V, T_A = 150°C		60	µA
			V_R = 70V		5.0	µA
			V_R = 70V, T_A = 150°C		100	µA
		BAV74	V_R = 50V		100	nA
			V_R = 50V, T_A = 150°C		100	µA
C_T	Total Capacitance	BAV70	V_R = 0V, f = 1.0MHz		1.5	pF
		BAV74	V_R = 0V, f = 1.0MHz		2.0	pF
t_{rr}	Reverse Recovery Time	BAV70	I_F = I_R = 10mA, I_{RR} = 1.0mA, R_L = 100Ω		6.0	ns
		BAV74	I_F = I_R = 10mA, I_{RR} = 1.0mA, R_L = 100Ω		4.0	ns

©2004 Fairchild Semiconductor Corporation

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FAST®	ISOPLANAR™	Power247™	Stealth™
ActiveArray™	FASTr™	LittleFET™	PowerEdge™	SuperFET™
Bottomless™	FPS™	MICROCOUPLER™	PowerSaver™	SuperSOT™-3
CoolFET™	FRFET™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	GlobalOptoisolator™	MicroPak™	QFET®	SuperSOT™-8
DOME™	GTO™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	HiSeC™	MSX™	QT Optoelectronics™	TinyLogic®
E^2CMOS™	I^2C™	MSXPro™	Quiet Series™	TINYOPTO™
EnSigna™	*i-Lo*™	OCX™	RapidConfigure™	TruTranslation™
FACT™	ImpliedDisconnect™	OCXPro™	RapidConnect™	UHC™
FACT Quiet Series™		OPTOLOGIC®	µSerDes™	UltraFET®
Across the board. Around the world.™		OPTOPLANAR™	SILENT SWITCHER®	VCX™
The Power Franchise®		PACMAN™	SMART START™	
Programmable Active Droop™		POP™	SPM™	

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

©2004 Fairchild Semiconductor Corporation