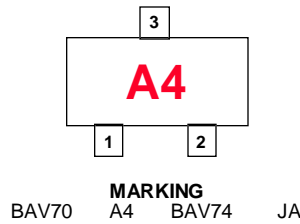
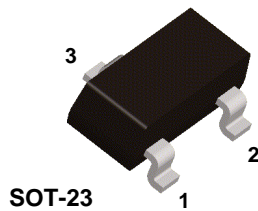
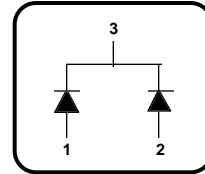


## BAV70 / 74



CONNECTION DIAGRAMS



### High Conductance Ultra Fast Diode

Sourced from Process 1P.

#### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W <sub>IV</sub>	Working Inverse Voltage	<b>BAV70</b>	70
		<b>BAV74</b>	50
I <sub>O</sub>	Average Rectified Current	200	mA
I <sub>F</sub>	DC Forward Current	600	mA
i <sub>f</sub>	Recurrent Peak Forward Current	700	mA
i <sub>f(surge)</sub>	Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	1.0	A
		2.0	A
T <sub>stg</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>J</sub>	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
		<b>BAV70/74</b>	
P <sub>D</sub>	Total Device Dissipation Derate above 25°C	350	mW
		2.8	mW/°C
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	357	°C/W

# High Conductance Ultra Fast Diode

(continued)

## Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter		Test Conditions	Min	Max	Units
B <sub>V</sub>	Breakdown Voltage	<b>BAV70</b>	I <sub>R</sub> = 100 μA	70		V
		<b>BAV74</b>	I <sub>R</sub> = 100 μA	50		V
I <sub>R</sub>	Reverse Current	<b>BAV70</b>	V <sub>R</sub> = 25 V, T <sub>A</sub> = 150°C		60	μA
			V <sub>R</sub> = 70 V		5.0	μA
		<b>BAV74</b>	V <sub>R</sub> = 70 V, T <sub>A</sub> = 150°C		100	μA
			V <sub>R</sub> = 50 V		100	nA
			V <sub>R</sub> = 50 V, T <sub>A</sub> = 150°C		100	μA
V <sub>F</sub>	Forward Voltage	<b>BAV70</b>	I <sub>F</sub> = 1.0 mA		715	mV
			I <sub>F</sub> = 10 mA		855	mV
			I <sub>F</sub> = 50 mA		1.0	V
			I <sub>F</sub> = 150 mA		1.25	V
		<b>BAV74</b>	I <sub>F</sub> = 100 mA		1.0	V
C <sub>O</sub>	Diode Capacitance	<b>BAV70</b>	V <sub>R</sub> = 0, f = 1.0 MHz		1.5	pF
		<b>BAV74</b>	V <sub>R</sub> = 0, f = 1.0 MHz		2.0	pF
T <sub>RR</sub>	Reverse Recovery Time	<b>BAV70</b>	I <sub>F</sub> = I <sub>R</sub> = 10 mA, I <sub>RR</sub> = 1.0 mA, R <sub>L</sub> = 100Ω		6.0	nS
		<b>BAV74</b>	I <sub>F</sub> = I <sub>R</sub> = 10 mA, I <sub>RR</sub> = 1.0 mA, R <sub>L</sub> = 100Ω		4.0	nS
Q <sub>S</sub>	Stored Charge	<b>BAV70</b>	I <sub>F</sub> = 10 mA		45	pC

BAV70 / BAV74