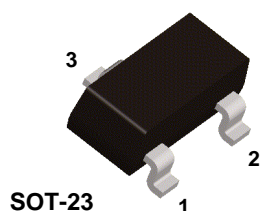
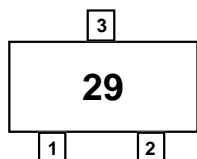


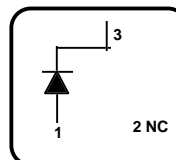
BAS21



SOT-23



CONNECTION DIAGRAM



General Purpose High Voltage Diode

Sourced from Process 1H. See MMBD1401 for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W_{IV}	Working Inverse Voltage	250	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	1.0	A
	Pulse width = 1.0 second	2.0	A
	Pulse width = 1.0 microsecond		
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
		BAS21	
P_D	Total Device Dissipation Derate above 25°C	350	mW
		2.8	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

General Purpose High Voltage Diode

(continued)

BAS21

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B_V	Breakdown Voltage	$I_R = 100 \mu\text{A}$	250		V
I_R	Reverse Voltage Leakage Current	$V_R = 200 \text{ V}$ $V_R = 200 \text{ V}, T_A = 150^\circ\text{C}$		100 100	nA μA
V_F	Forward Voltage	$I_F = 100 \text{ mA}$ $I_F = 200 \text{ mA}$		1.0 1.25	V V
C_O	Diode Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		5.0	pF
T_{RR}	Reverse Recovery Time	$I_F = I_R = 30 \text{ mA}, I_{RR} = 3.0 \text{ mA},$ $R_L = 100 \Omega$		50	nS

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FACT Quiet Series™	Quiet Series™	
FAST®	SuperSOT™-3	
FASTr™	SuperSOT™-6	
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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.
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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.
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.