

FAIRCHILD SEMICONDUCTOR

84 DE 3469674 0027297 4

FAIRCHILD

A Schlumberger Company

BAY73/BA129 7-01-09
High Voltage Low
Leakage Diodes

- BV... 125 V (MIN) @ 100 μ A (BAY73)
- BV... 200 V (MIN) @ 100 μ A (BA129)

PACKAGES

BAY73	DO-35
BA129	DO-35

ABSOLUTE MAXIMUM RATINGS (Note 1)**Temperatures**

Storage Temperature Range
Maximum Junction Operating Temperature
Lead Temperature

-65°C to +200°C
+175°C
+260°C

Power Dissipation (Note 2)

Maximum Total Power Dissipation at 25°C Ambient
Linear Power Derating Factor (from 25°C)

500 mW
3.33 mW/°C

Maximum Voltage and Currents

WIV Working Inverse Voltage BAY73
BA129

100 V
180 V

IO Average Rectified Current
IF Continuous Forward Current
IF Peak Repetitive Forward Current

200 mA
500 mA
600 mA

IF(surge) Peak Forward Surge Current
Pulse Width = 1 s
Pulse Width = 1 μ s

1.0 A
4.0 A

ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	BAY73		BA129		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
VF	Forward Voltage	0.85	1.00			V	IF = 200 mA
		0.81	0.94			V	IF = 100 mA
		0.78	0.88	0.78	1.00	V	IF = 50 mA
		0.69	0.80	0.69	0.83	V	IF = 10 mA
		0.67	0.75			V	IF = 5.0 mA
		0.60	0.68	0.60	0.71	V	IF = 1.0 mA
				0.51	0.60	V	IF = 0.1 mA
IR	Reverse Current		500			nA	VR = 20 V, TA = 125°C
			5.0			nA	VR = 100 V
			1.0			μ A	VR = 100 V, TA = 125°C
					10	nA	VR = 180 V
					5.0	μ A	VR = 180 V, TA = 100°C
BV	Breakdown Voltage	125		200		V	IR = 100 μ A
C	Capacitance		8.0		6.0	pf	VR = 0, f = 1.0 MHz
trr	Reverse Recovery Time		3.0			μ s	IF = 10 mA, VR = 35 V RL = 1.0 to 100 K Ω CL = 10 pf, JAN 256

NOTES:

1. These ratings are limiting values above which the serviceability of the diode may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulses or low duty-cycle operation.
3. For product family characteristic curves, refer to Chapter 4, D2