Silicon - Diode

BA129

180V / 500mA / 500mW

High Voltage, Low Leakage Diode

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

Datasheet Rev. 1.3 – 02/19 – data without warranty / liability

BAY73 · BA129

HIGH VOLTAGE, LOW LEAKAGE DIODES

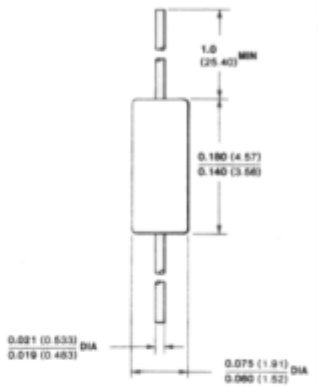
DIFFUSED SILICON PLANAR

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

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures			
Storage Temperature Range			−65°C to +200°C
Maximum Junction Operating Temperature			+175°C
Lead Temperature			+260°C
Power Dissipation (Note 2)			
Maximum Total Power Dissipation at 25°C Ambient			500 mW
Linear Power Derating Factor (from 25°C)			3.33 mW / °C
Maximum Voltage and Currents			
WIV	Working Inverse Voltage	BAY73	100 V
		BA129	180 V
I_O	Average Rectified Current		200 mA
I_F	Continuous Forward Current		500 mA
i_f	Peak Repetitive Forward Current		600 mA
$i_{f(surge)}$	Peak Forward Surge Current		
	Pulse Width = 1 s		1.0 A
	Pulse Width = 1 μs		4.0 A

DO-35 OUTLINE



NOTES:
Copper clad steel leads, tin plated
Gold plated leads available
Hermetically sealed glass package
Package weight is 0.14 gram

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

SYMBOL	CHARACTERISTIC	BAY73 MIN	BAY73 MAX	BA129 MIN	BA129 MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage	0.85	1.00			V	I_F = 200 mA
		0.81	0.94			V	I_F = 100 mA
		0.78	0.88	0.78	1.00	V	I_F =50 mA
		0.69	0.80	0.69	0.83	V	I_F = 10 mA
		0.67	0.75			V	I_F = 5.0 mA
		0.60	0.68	0.60	0.71	V	I_F = 1.0 mA
				0.51	0.60	V	I_F = 0.1 mA
I_R	Reverse Current		500			nA	V_R = 20 V, T_A = 125°C
			5.0			nA	V_R = 100 V
			1.0			μA	V_R = 100 V, T_A = 125°C
					10	nA	V_R = 180 V
					5.0	μA	V_R = 180 V, T_A = 100°C
BV	Breakdown Voltage	125		200		V	I_R = 100 μA
C	Capacitance		8.0		6.0	pF	V_R = 0, f = 1.0 MHz
t_{rr}	Reverse Recovery Time		3.0			μs	I_f = 10 mA, V_r = 35 V R_L = 1.0 to 100 KΩ C_L = 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