Silicon - Diode

BA128

50V / 500mA / 500mW

General Purpose Diode

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

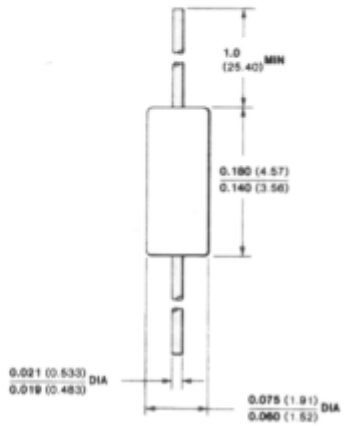
BA128 · BA130

GENERAL PURPOSE DIODES

DIFFUSED SILICON PLANAR

- **WIV . . . 50 V (BA128), 25 V (BA130)**
- **I_R . . . 100 nA (MAX) @ WIV**

DO-35 OUTLINE



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

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

Storage Temperature Range	−65°C to +200°C
Maximum Junction Operating Temperature	175°C
Lead Temperature (10 seconds)	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	BA128	50 V
		BA130	25 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

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

SYMBOL	CHARACTERISTIC	BA128 MIN	BA128 MAX	BA130 MIN	BA130 MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage	0.73	1.00			V	I_F = 50 mA
		0.63	0.79	0.69	1.00	V	I_F = 10 mA
		0.51	0.64	0.56	0.71	V	I_F = 1.0 mA
		0.40	0.52	0.45	0.58	V	I_F = 0.1 mA
				0.34	0.47	V	I_F = 0.01 mA
I_R	Reverse Current		100			nA	V_R = 50 V
					100	nA	V_R = 25 V
			100			μA	V_R = 50 V, T_A = 100°C
					100	μA	V_R = 25 V, T_A = 100°C
BV	Breakdown Voltage	75				V	I_R = 100 μA
				30		V	I_R = 5 μA
C	Capacitance		5.0		2.0	pF	V_R = 0, f = 1.0 MHz

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 pulsed or low duty-cycle operation.
3. For product family characteristic curves, refer to Chapter 4, D4.