

**FAIRCHILD**

A Schlumberger Company

**BA128/BA130**  
General Purpose Diodes

T-01-09

- WIV... 50 V (BA128), 25 V (BA130)
- I<sub>R</sub>... 100 nA (MAX) @ WIV

**PACKAGES**

BA128 DO-35  
BA130 DO-35

**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 <sub>O</sub>	Average Rectified Current		200 mA
I <sub>F</sub>	Continuous Forward Current		500 mA
I <sub>F</sub>	Peak Repetitive Forward Current		600 mA
I <sub>F</sub> (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		BA130		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
V <sub>F</sub>	Forward Voltage	0.73	1.00			V	I <sub>F</sub> = 50 mA
		0.63	0.79	0.69	1.00	V	I <sub>F</sub> = 10 mA
		0.51	0.64	0.56	0.71	V	I <sub>F</sub> = 1.0 mA
		0.40	0.52	0.45	0.58	V	I <sub>F</sub> = 0.1 mA
I <sub>R</sub>	Reverse Current		100			nA	V <sub>R</sub> = 50 V
					100	nA	V <sub>R</sub> = 25 V
			100			μA	V <sub>R</sub> = 50 V, T <sub>A</sub> = 100°C
					100	μA	V <sub>R</sub> = 25 V, T <sub>A</sub> = 100°C
BV	Breakdown Voltage	75		30		V	I <sub>R</sub> = 100 μA
						V	I <sub>R</sub> = 5 μA
C	Capacitance		5.0		2.0	pf	V <sub>R</sub> = 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.