

FAIRCHILD SEMICONDUCTOR

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FAIRCHILD

A Schlumberger Company

BA128/BA130

T-01-09

General Purpose Diodes

- WIV... 50 V (BA128), 25 V (BA130)
- I_R ... 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_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 μ s		4.0 A

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

SYMBOL	CHARACTERISTIC	BA128		BA130		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
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		100	nA	$V_R = 50$ V
			100		100	nA	$V_R = 25$ V
					100	μ A	$V_R = 50$ V, $T_A = 100^\circ$ C
BV	Breakdown Voltage	75		30		V	$I_R = 100$ μ A
						V	$I_R = 5$ μ A
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.