

FAIRCHILD

A Schlumberger Company

BA128/BA130

General Purpose Diodes

T-01-09

- 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
				0.45	0.58	V	$I_F = 0.1$ mA
		0.40	0.52	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			μ A	$V_R = 50$ V, $T_A = 100^\circ$ C
					100	μ A	$V_R = 25$ 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:

- These ratings are limiting values above which the serviceability of the diode may be impaired.
- These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.
- For product family characteristic curves, refer to Chapter 4, D4.