

3469674 FAIRCHILD SEMICONDUCTOR

84D 27293 D

FAIRCHILD

A Schlumberger Company

BAX13

High Speed Switching Diode

- C...3.0 pF (MAX)
- t_{rr} ...4.0 ns (MAX)

PACKAGE

BAX13

DO-35

ABSOLUTE MAXIMUM RATINGS (Note 1)**Temperatures**

Storage Temperature Range	-65°C to +200°C
Maximum Operating Junction Temperature	+175°C
Lead Temperature	+260°C

Power Dissipation (Note 2)

Maximum Total Dissipation at 25°C Ambient	500 mW
Linear Derating Factor (from 25°C)	3.33 mW/°C

Maximum Voltages and Currents

V_{RRM}	Repetitive Peak Reverse Voltage	50 V
V_R	Reverse Voltage	50 V
I_O	Average Rectified Current	100 mA
I_F	Forward Current	300 mA
I_{fR}	Recurrent Peak Forward Current	400 mA
I_{FSM}	Peak Forward Surge Current	
	Pulse Width = 1.0 s	1.0 A
	Pulse Width = 1.0 μ s	4.0 A

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

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage		0.7 0.8 1.0 1.53	V V V V	$I_F = 2.0$ mA $I_F = 10$ mA, $T_A = 100^\circ$ C $I_F = 20$ mA $I_F = 75$ mA
I_R	Reverse Current		25 10 50 200 25	nA μ A nA nA μ A	$V_R = 10$ V $V_R = 10$ V, $T_A = 150^\circ$ C $V_R = 25$ V $V_R = 50$ V $V_R = 50$ V, $T_A = 150^\circ$ C
C	Capacitance		3.0	pF	$V_R = 0$, $f = 1.0$ MHz
t_{rr}	Reverse Recovery Time		4.0	ns	$I_F = 10$ mA, $V_R = 6.0$ V, $R_L = 100\Omega$, $I_r = 1.0$ mA
Q_S	Recovered Charge		45	pC	$I_F = 10$ mA, $V_R = 5.0$ V, $R_L = 500\Omega$

NOTES:

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