

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

VRRM Repetitive Peak Reverse Voltage

50 V

VR Reverse Voltage

50 V

IO Average Rectified Current

100 mA

IF Forward Current

300 mA

IF Recurrent Peak Forward Current

400 mA

IFSM 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
VF	Forward Voltage		0.7	V	IF = 2.0 mA
			0.8	V	IF = 10 mA, TA = 100°C
			1.0	V	IF = 20 mA
			1.53	V	IF = 75 mA
IR	Reverse Current		25	nA	VR = 10 V
			10	μ A	VR = 10 V, TA = 150°C
			50	nA	VR = 25 V
			200	nA	VR = 50 V
			25	μ A	VR = 50 V, TA = 150°C
C	Capacitance		3.0	pF	VR = 0, f = 1.0 MHz
t _{rr}	Reverse Recovery Time		4.0	ns	IF = 10 mA, VR = 6.0 V, RL = 100 Ω , IR = 1.0 mA
QS	Recovered Charge		45	pC	IF = 10 mA, VR = 5.0 V, RL = 500 Ω

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.