FAIRCHILD
A Schlumberger Company

BAX16

T-81-09

General Purpose Industrial Diode

- BV...180 V (MIN) @ 100 μA
- I_R...100 nA (MAX) @ 150V

PACKAGE
BAX16 DO-35

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

Storage Temperature Range	−65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+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	150 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 μs	4.0 A

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

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage		1.5	V	I_F = 200 mA
			1.4	V	I_F = 200 mA, T_A = 175°C
			1.3	V	I_F = 100 mA
			0.85	V	I_F = 10 mA, T_A = 100°C
			0.65	V	I_F = 1 mA
I_R	Reverse Current		100	nA	V_R = 150 V
			100	μA	V_R = 150 V, T_A = 150°C
			25	nA	V_R = 50 V
			25	μA	V_R = 50 V, T_A = 150°C
BV	Breakdown Voltage	180		V	I_R = 100 μA
C	Capacitance		10	pf	V_R = 0, f = 1 MHz
t_{rr}	Reverse Recovery Time (Note 3)		120	ns	I_F = 30 mA, I_R = 30 mA, R_L = 100 Ω
Qs	Stored Charge		700	pC	I_F = 10 mA, V_R = 5 V, R_L = 500 Ω

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. Recovery to I_R = 3 mA.
4. For product family characteristic curves, refer to Chapter 4, D1.

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