

# Silicon - Diode

## **BA217**

30V / 100mA / 500mW

General Purpose Diode

# DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

# BA216 • BA217 • BA218 • BA219

## GENERAL PURPOSE DIODES

DIFFUSED SILICON PLANAR

- WIV... 10 V to 100 V
- $t_{rr}$ ... 4 ns (MAX) BA216-218

**ABSOLUTE MAXIMUM RATINGS** (Note 1)

**Temperatures**

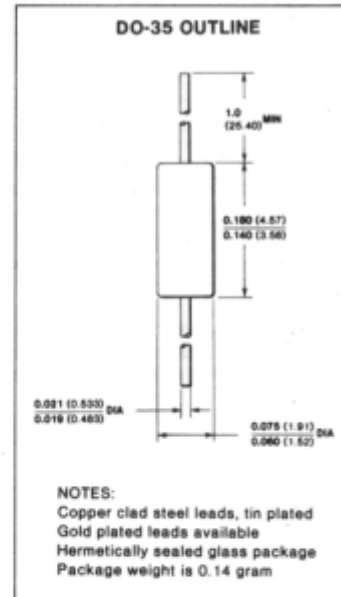
Storage Temperature Range	-65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

**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	BA216	10 V	BA217	30 V
$I_O$	Average Rectified Current	BA218	50 V	BA219	100V
$I_F$	Continuous Forward Current				100 mA
$I_F$	Peak Repetitive Forward Current				300 mA
$i_f(\text{surge})$	Peak Forward Surge Current				400 mA
	Pulse Width = 1 s				1.0 A
	Pulse Width = 1 $\mu$ s				4.0 A



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

SYMBOL	CHARACTERISTIC	BA216		BA217 • BA218		BA219		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
$V_F$	Forward Voltage	0.70	1.00		1.50		1.40		$I_F = 100$ mA $I_F = 50$ mA $I_F = 15$ mA $I_F = 10$ mA $I_F = 3.0$ mA $I_F = 1.0$ mA $I_F = 0.2$ mA
$I_R$	Reverse Current		1500		50			nA	$V_R = 10$ V $V_R = 10$ V $V_R = 25$ V $V_R = 30$ V $V_R = 50$ V $V_R = 50$ V $V_R = 100$ V
C	Capacitance		3.0		3.0		5.0	pF	$V_R = 0, f = 1$ MHz
$t_{rr}$	Reverse Recovery Time		4.0		4.0		120	ns	$I_F = 10$ mA, $I_R = 60$ mA $R_L = 100 \Omega$ (Note 3) $I_F = 30$ mA, $I_R = 30$ mA $R_L = 100 \Omega$ (Note 4)

- 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  $I_R = 1$  mA.
  4. Recovery to  $I_R = 3$  mA.
  5. For product family characteristic curves, refer to Chapter 4, D4