

# Silicon - Diode

## **BA181**

20V / 300mA / 500mW

General Purpose Diode

# DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

## BA180 • BA181

### GENERAL PURPOSE DIODES

SILICON PLANAR

- BV... 10 V (MIN) @ 100  $\mu$ A (BA180)
- BV... 20 V(MIN) @ 100  $\mu$ A (BA181)

#### ABSOLUTE MAXIMUM RATINGS (Note 1)

##### Temperatures

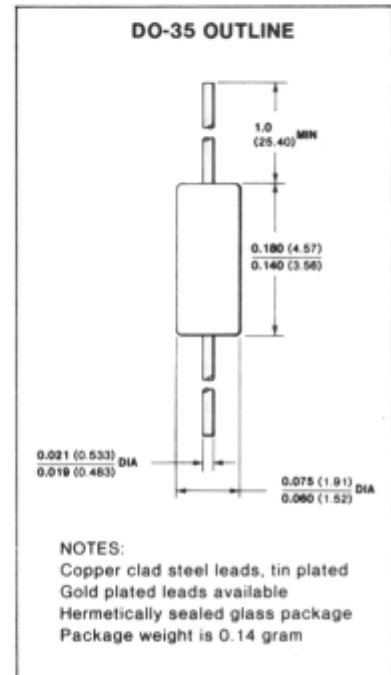
Storage Temperature Range	-65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

##### 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	BA180	10 V
		BA181	20 V
$I_O$	Average Rectified Current		100 mA
$I_F$	Continuous Forward Current		300 mA
$i_f$	Peak Repetitive Forward Current		400 mA
$i_f$ (surge)	Peak Forward Surge Current		1.0 A
	Pulse Width = 1 s		4.0 A
	Pulse Width = 1 $\mu$ s		



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

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
$V_F$	Forward Voltage		1.0	V	$I_F = 4$ mA
$I_R$	Reverse Current		1.0	$\mu$ A	$V_R = 5.0$ V
BV	Breakdown Voltage	BA180	10	V	$I_R = 100$ $\mu$ A
		BA181	20	V	$I_R = 100$ $\mu$ A

#### 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. For product family characteristic curves, refer to Chapter 4, D4.