

# Silicon Diode

## **1N463A**

175V/500mA

# DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

## IN461A • IN462A • IN463A • IN464A

### GENERAL PURPOSE, HIGH CONDUCTANCE DIODES

DIFFUSED SILICON PLANAR

- $V_F$ ... 1.0 V (MAX) @ 100 mA
- $I_R$ ... 500 nA (MAX) @ WIV

#### ABSOLUTE MAXIMUM RATINGS (Note 1)

##### Temperatures

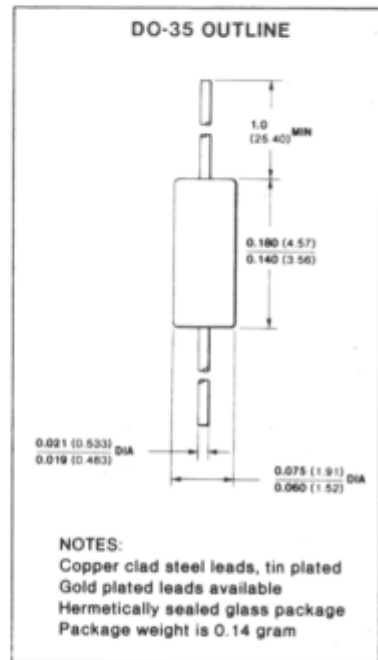
Storage Temperature Range	-65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

##### 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

	IN461A	IN462A	IN463A	IN464A
WIV Working Inverse Voltage	25 V	60 V	175 V	125 V
$I_O$ Average Rectified Current	200 mA	200 mA	200 mA	200 mA
$I_F$ Continuous Forward Current	500 mA	500 mA	500 mA	500 mA
$i_f$ Peak Repetitive Forward Current	600 mA	600 mA	600 mA	600 mA
$i_f$ (surge) Peak Forward Surge Current				
Pulse Width = 1 s	1.0 A	1.0 A	1.0 A	1.0 A
Pulse Width = 1 $\mu$ s	4.0 A	4.0 A	4.0 A	4.0 A



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

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
$V_F$	Forward Voltage		1.0	V	$I_f = 100$ mA
$I_R$	Reverse Current		500 30	nA $\mu$ A	$V_R =$ Rated WIV $V_R =$ Rated WIV, $T_A = 150^\circ\text{C}$
BV	Breakdown Voltage	IN461A IN462A IN463A IN464A	30 70 200 150	V V V V	$I_R = 100$ $\mu$ A $I_R = 100$ $\mu$ A $I_R = 100$ $\mu$ A $I_R = 100$ $\mu$ 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, D2.

**CURVE SET NUMBER D2**  
**LOW LEAKAGE SMALL SIGNAL DIODE**

**TYPICAL ELECTRICAL CHARACTERISTIC CURVES**  
 AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE NOTED

