

# Silicon Diode

## **1N629**

175V/400mA

# DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

## 1N625 through 1N629

### GENERAL PURPOSE DIODES

DIFFUSED SILICON PLANAR

- $V_F \dots 1.5 \text{ V (MAX) @ } 4.0 \text{ mA}$
- $I_R \dots 1.0 \mu\text{A (MAX) @ WIV}$

#### ABSOLUTE MAXIMUM RATINGS (Note 1)

##### Temperatures

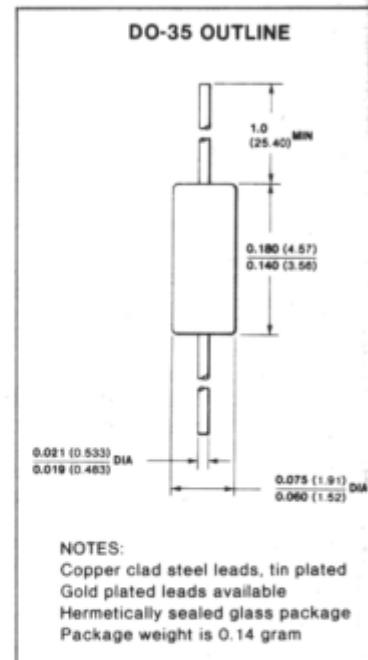
Storage Temperature Range	-65°C to +200°C
Maximum Operating Junction Temperature	175°C
Lead Temperatures	260°C

##### Power Dissipation (Notes 2)

Maximum Total Dissipation at 25°C Ambient	500 mW
Linear Derating Factor (from 25°C)	3.33 mW/°C

##### Maximum Voltage and Currents

	1N625	1N626	1N627	1N628	1N629
WIV Working Inverse Voltage	20 V	35 V	75 V	125 V	175 V
$I_O$ Average Rectified Current	175 mA	175 mA	175 mA	175 mA	175 mA
$I_F$ Forward Current Steady State	400 mA	400 mA	400 mA	400 mA	400 mA
$i_F(\text{surge})$ Peak Forward Surge Current					
Pulse Width = 1.0 s	1.0 A	1.0 A	1.0 A	1.0 A	1.0 A
Pulse Width = 1.0 $\mu\text{s}$	4.0 A	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		1.5	V	$I_F = 4.0 \text{ mA}$
$I_R$	Reverse Current		1.0 30	$\mu\text{A}$ $\mu\text{A}$	$V_R = \text{rated WIV}$ $V_R = \text{rated WIV, } T_A = 100^\circ\text{C}$
BV	Breakdown Voltage	1N625 1N626 1N627 1N628 1N629	30 50 100 150 200	V V V V V	$I_R = 100 \mu\text{A}$ $I_R = 100 \mu\text{A}$ $I_R = 100 \mu\text{A}$ $I_R = 100 \mu\text{A}$ $I_R = 100 \mu\text{A}$
$t_{rr}$	Reverse Recovery Time		1.0	$\mu\text{s}$	$I_F = 30 \text{ mA, } V_R = 35 \text{ V,}$ Recovery to 400 k $\Omega$

#### NOTES:

1. The maximum ratings are limiting values above which life or satisfactory performance may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. For product family characteristic curves, refer to Chapter 4, D1.

**CURVE SET NUMBER D1**  
HIGH VOLTAGE SMALL SIGNAL DIODE

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

