

# Silicon Diode

## **1N628**

125V/400mA

# DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

# 1N625 through 1N629

## GENERAL PURPOSE DIODES

DIFFUSED SILICON PLANAR

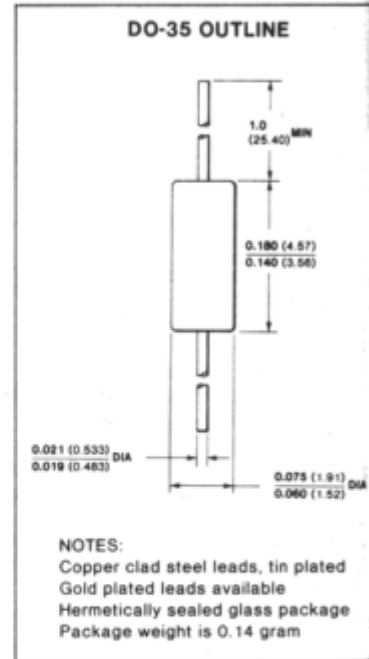
- $V_F \dots 1.5 \text{ V (MAX) @ } 4.0 \text{ mA}$
- $I_R \dots 1.0 \mu\text{A (MAX) @ WIV}$

**ABSOLUTE MAXIMUM RATINGS (Note 1)**

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

<b>Power Dissipation (Notes 2)</b>		
Maximum Total Dissipation at 25°C Ambient		500 mW
Linear Derating Factor (from 25°C)		3.33 mW / °C

<b>Maximum Voltage and Currents</b>		<b>1N625</b>	<b>1N626</b>	<b>1N627</b>	<b>1N628</b>	<b>1N629</b>
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	30	V	$I_R = 100 \mu\text{A}$
		1N626	50	V	$I_R = 100 \mu\text{A}$
		1N627	100	V	$I_R = 100 \mu\text{A}$
		1N628	150	V	$I_R = 100 \mu\text{A}$
		1N629	200	V	$I_R = 100 \mu\text{A}$
$t_{rr}$	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

