

# Silicon Diode

## **1S922**

150V/200mA

# DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

**1S920 • 1S921 • 1S922 • 1S923****GENERAL PURPOSE DIODES**

DIFFUSED SILICON PLANAR

- $V_F \dots 1.2$  (MAX) @ 200 mA
- $I_R \dots 100$  nA (MAX) @ RATED WIV

**ABSOLUTE MAXIMUM RATINGS** (Note 1)**Temperatures**

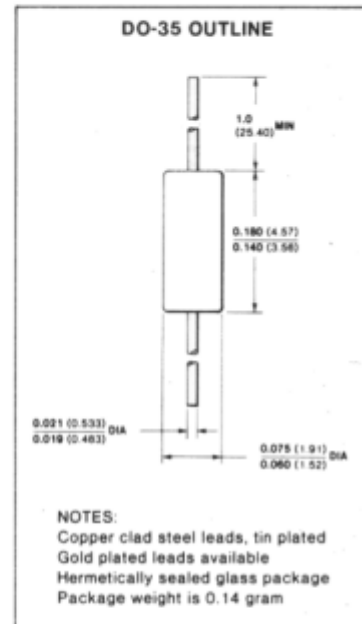
Storage Temperature Range	-65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

**Power Dissipation** (Note 2)

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

**Maximum Voltage and Currents**

		1S920	1S921	1S922	1S923
WIV	Working Inverse Voltage (-65°C to +100°C)	50 V	100 V	150 V	200 V
$I_O$	Average Forward Current	200 mA	200 mA	200 mA	200 mA
$i_f$	Recurent Peak Forward Current	600 mA	600 mA	600 mA	600 mA
$i_f(\text{surge})$	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
$I_R$	Inverse Current		100 10	nA $\mu$ A	$V_R = \text{rated WIV}$ $V_R = \text{rated WIV}, T_A = 100^\circ\text{C}$
$V_F$	Forward Voltage		1.2	V	$I_F = 200$ mA
C	Capacitance		6.5	pF	$V_R = 0, f = 1$ MHz
$Q_S$	Stored Charge		12	nC	$I_F = 10$ mA, $V_R = 10$ V

**NOTES:**

1. These ratings are limiting values above which the serviceability of any individual semiconductor device 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, D1.

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

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

