

Silicon Diode

1S920

50V/200mA

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

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

DIFFUSED SILICON PLANAR

- V_F ... 1.2 (MAX) @ 200 mA
- I_R ... 100 nA (MAX) @ RATED WIV

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

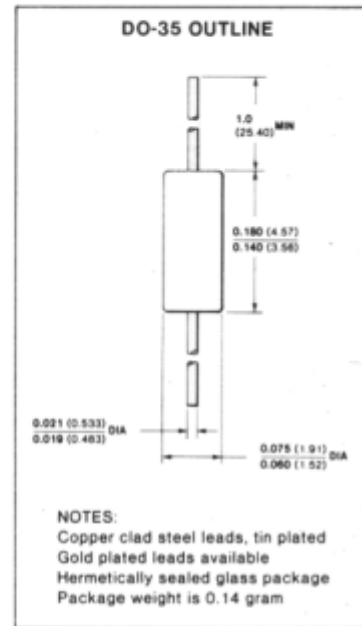
Storage Temperature Range	-65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

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 μ 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 μ A	V_R = rated WIV V_R = rated WIV, T_A = 100°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

