

Silicon Diode Array

1N6100

65V/350mA

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

1N6100 • 1N6101

PLANAR AIR-ISOLATED MONOLITHIC DIODE ARRAYS

- C ... 3.0 pF (MAX)
- ΔV_F ... 10 mV (MAX) @ 10 μ A

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

Storage Temperature Range	-55°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

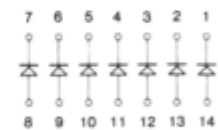
Power Dissipation (Note 2)

Maximum Dissipation per Junction at 25°C Ambient	400 mW
Maximum Dissipation per Package at 25°C Ambient	600 mW
Linear Derating Factor (from 25°C) Junction	2.67 mW/°C
Package	4.0 mW/°C

Maximum Voltage and Currents

WIV	Working Inverse Voltage	65 V
I_F	Continuous Forward Current	350 mA
I_F (surge)	Peak Forward Surge Current	
	Pulse Width = 1.0 s	1.0 A
	Pulse Width = 1.0 μ s	2.0 A

CONNECTION DIAGRAM



See Package Outlines

TO-86	1N6100
TO-116-2	1N6101

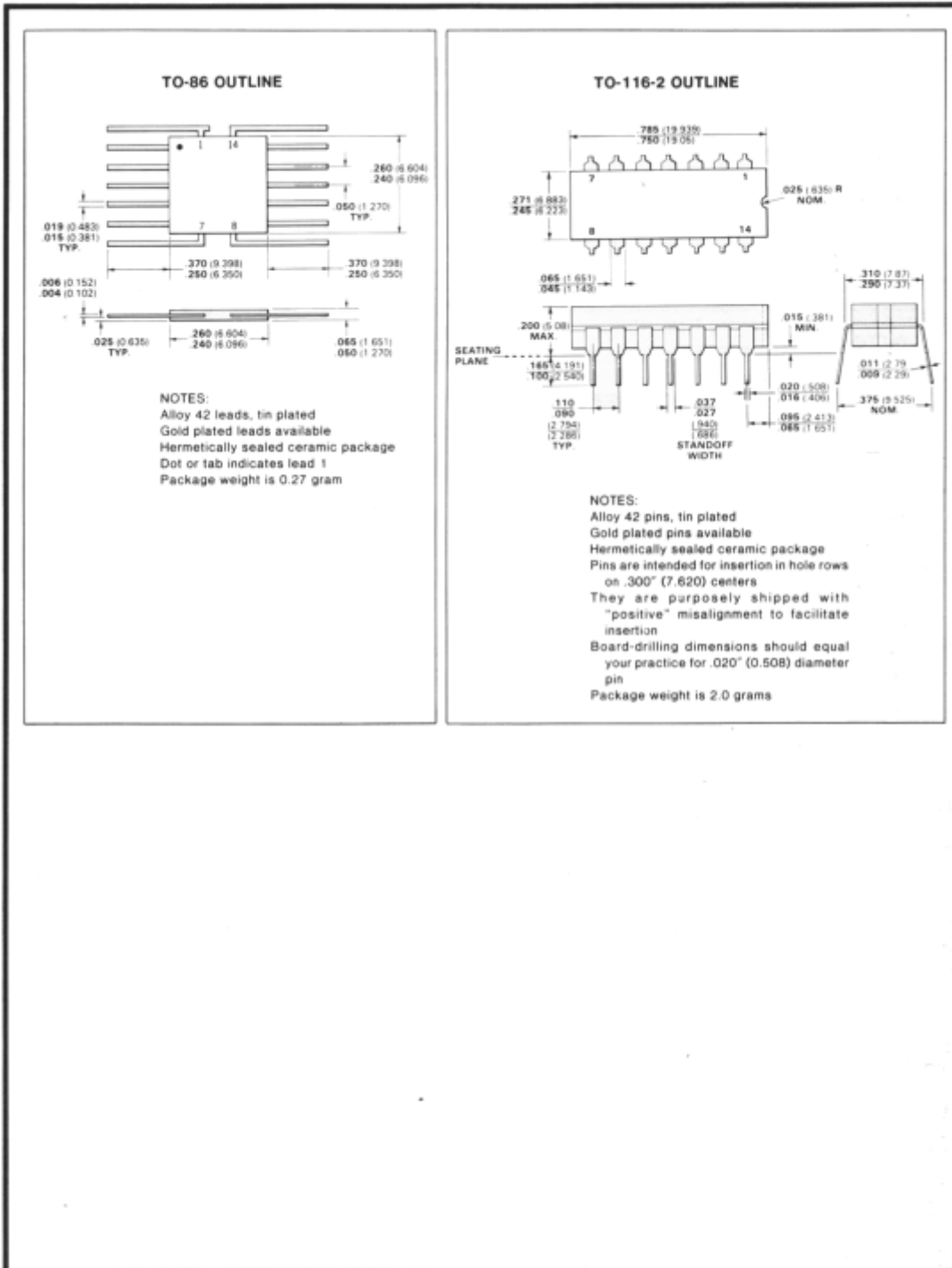
ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
BV	Breakdown Voltage	75		V	$I_R = 5.0 \mu$ A
I_R	Reverse Current (Note 4)		25 50	nA μ A	$V_R = 20$ V $V_R = 20$ V, $T_A = 150^\circ$ C
V_F	Forward Voltage (Note 3)		1.0	V	$I_F = 100$ mA
V_{FM}	Peak Forward Voltage		5.0	V	$I_F = 100 \mu$ A, PW = 100 ns Duty Cycle $\leq 2\%$
I_{RX}	Reverse Current (Note 5)		10	μ A	$V_R = 40$ V
V_{FX}	Forward Voltage (Note 5)		1.0	V	$I_F = 25$ mA
C	Capacitance		3.0	pF	$V_R = 0$, $f = 1$ MHz
t_{fr}	Forward Recovery Time (Note 6)		15	ns	$I_f = 100$ mA, $R_S = 50 \Omega$ $V_{fr} = 1.1$ V, $t_r \leq 10$ ns
t_{rr}	Reverse Recovery Time (Note 6)		5.0	ns	$I_f = I_r = 10$ mA $I_{rr} = 1.0$ mA, $R_L = 100 \Omega$
ΔV_F	Forward Voltage Match (Note 6)		10	mV	$I_F = 10$ mA

NOTES

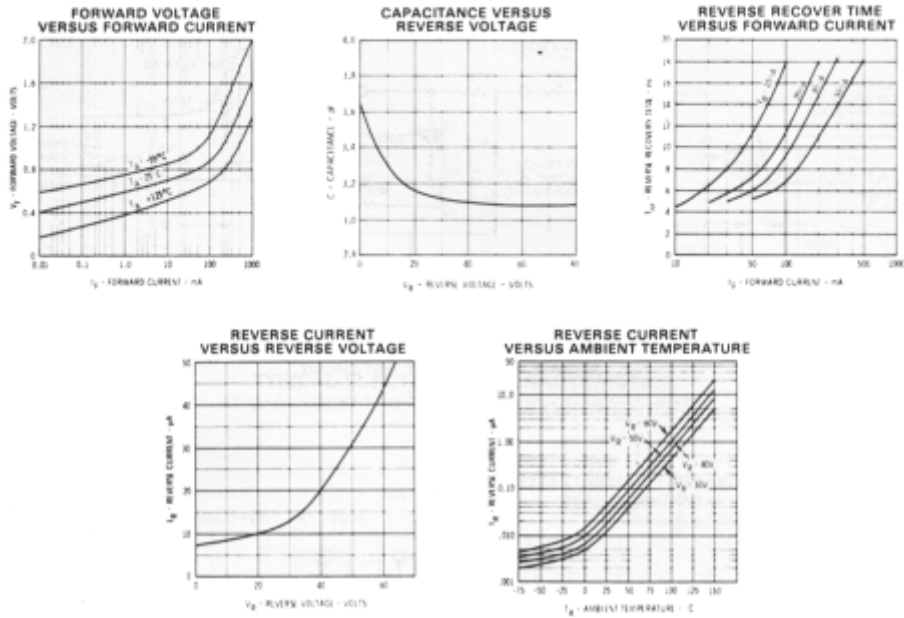
- 1 These ratings are limiting values above which life or satisfactory performance may be impaired.
- 2 These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.
- 3 V_F is measured using an 8 ms pulse.
- 4 See Test Circuits (Note 6) for measurement of reverse current of an individual diode.
- 5 $I_r = 25$ mA for each of the other diodes in the array.
- 6 For product family characteristic curves and test circuits, refer to Chapter 4, D15.

FAIRCHILD • DIODE ARRAYS



CURVE SET NUMBER D15
AIR-ISOLATED MONOLITHIC DIODE ARRAY

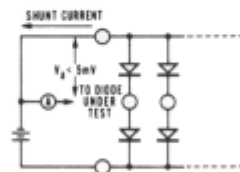
TYPICAL ELECTRICAL CHARACTERISTIC CURVES
 AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE NOTED



TEST CIRCUITS

To measure reverse current of an individual diode, the following test circuits are used:

COMMON CATHODE DIODES



COMMON ANODE DIODES

