

**1N5774 and 1N6509**  
**JAN, JANTX,**  
**JANTXV**  
MIL -S-19500/474

## Features

- $BV \geq 60 \text{ V @ } 10 \mu\text{A}$
- $I_R \leq 100 \text{ nA @ } 40 \text{ V}$
- $V_F \leq 1 \text{ V @ } 100 \text{ mA}$
- $C \dots 8.0 \text{ pF (MAX)}$

## Absolute Maximum Ratings (Note 1)

### Temperatures

- Storage Temperature Range:  $-65^\circ\text{C}$  to  $+200^\circ\text{C}$
- Maximum Junction Operating Temperature:  $+150^\circ\text{C}$
- Lead Temperature:  $+260^\circ\text{C}$

### Power Dissipation (Note 2)

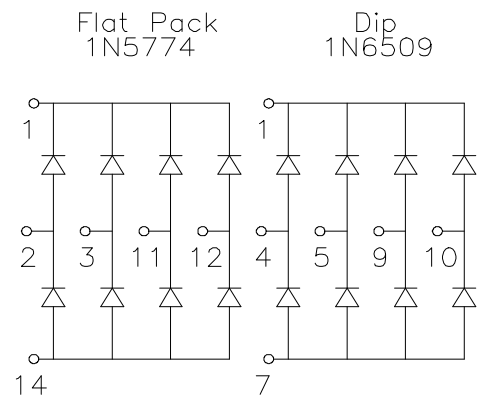
- Maximum Dissipation per Junction at  $25^\circ\text{C}$  Ambient 400 mW
- Maximum Dissipation per Package at  $25^\circ\text{C}$  Ambient 1N5774 - 500 mW  
1N6509 - 600 mW
- Linear Derating factor (from  $25^\circ\text{C}$ ) Junction 3.2 mW /  $^\circ\text{C}$   
Package 4.0 mW /  $^\circ\text{C}$

### Maximum Voltage and Currents

- $I_o$  Average Rectified Current Per Junction 300 mA
- $I_{f(\text{Surge})}$  Peak Forward Surge Current  
Pulse Width = 8.3 ms 500 mA

**PLANAR AIR-ISOLATED  
MONOLITHIC DIODE  
ARRAYS\***

### CONNECTION DIAGRAM



See Package Outline:  
TO-86 TO-116-2

## Electrical Characteristics (25 °C Ambient Temperature unless otherwise noted)

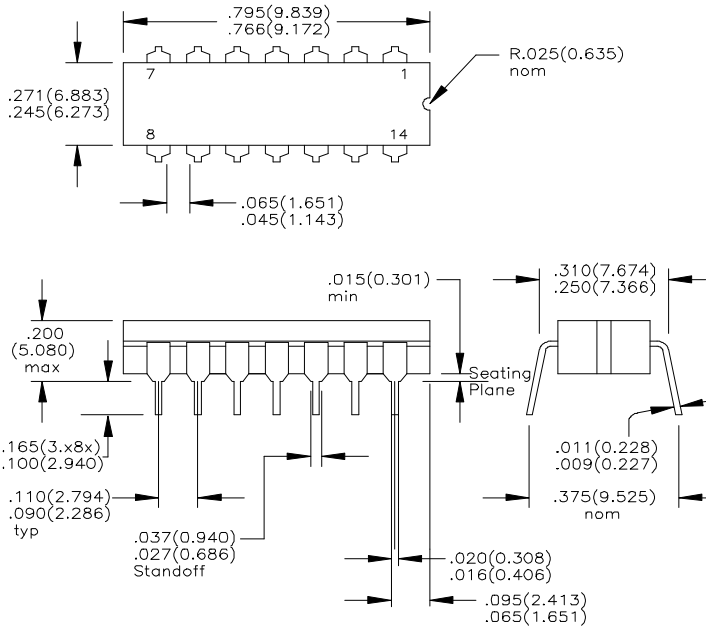
CHARACTERISTIC	SYMBOL	MIN	MAX	UNITS	TEST CONDITIONS
Breakdown Voltage	BV	60		V	$I_R = 10 \mu\text{A}$
Reverse Current	$I_R$		100 50	nA $\mu\text{A}$	$V_R = 40 \text{ V}$ $V_R = 40 \text{ V}, T_A = 150^\circ\text{C}$
Forward Voltage (Note 3)	$V_F$		1.0 1.5	V V	$V_F = 100 \text{ mA}$ $V_F = 500 \text{ mA}$
Capacitance (Note 4)	C		8.0	pF	$V_R = 0, f = 1.0 \text{ MHz}$
Forward Recovery Time	$t_{fr}$		40	ns	$I_F = 500 \text{ mA}$
Reverse Recovery Time	$t_{rr}$		20	ns	$I_F = I_R = 200 \text{ mA}$ $R_L = 100 \Omega, I_{rr} = 20 \text{ mA}$

### Notes:

1. The maximum ratings are limited values above which life satisfactory performance may be impaired.
2. These are steady state limits. The factory should be consulted or applications involving pulsed or low duty cycle operation.
3.  $V_F$  is measured using a  $300 \mu\text{s}$  pulse.
4. The capacitance is measured from pin to pin across any one of the diodes. The interaction of other diodes is therefore included in the measured value.

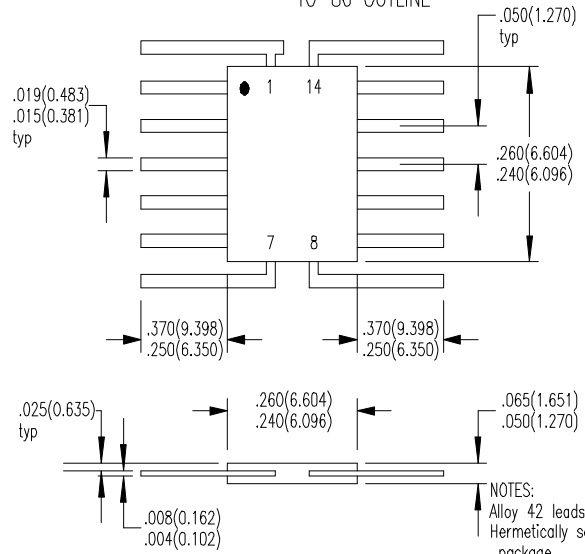
\* Dual 8-Diode Core Driver Matrix

TO-116-2 OUTLINE



NOTES:  
Alloy 42 pins, solder dipped.  
Hermetically sealed ceramic package  
Pins are intended for insertion in hole rows on .300 inch centers (7.62)  
They are purposely shipped with "positive" misalignment to facilitate insertion  
Board-drilling dimensions should equal your practice for .020 inch diameter pin (0.508)  
Package weight is 2.0 grams

TO-86 OUTLINE



NOTES:  
Alloy 42 leads, solder dipped  
Hermetically sealed ceramic package  
Dot or tabs indicate lead 1  
Package weight is 0.27 grams