

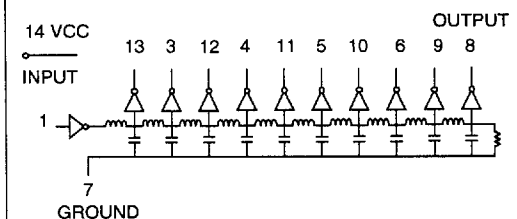
# 14 Pin DIP 10 Tap TTL Compatible Active Delay Lines

| TAP DELAYS<br>±5% or ±2 nS† | TOTAL DELAYS<br>±5% or ±2 nS† | PART<br>NUMBER | TAP DELAYS<br>±5% or ±2 nS† | TOTAL DELAYS<br>±5% or ±2 nS† | PART<br>NUMBER |
|-----------------------------|-------------------------------|----------------|-----------------------------|-------------------------------|----------------|
| 5                           | 50                            | EP8301         | 44                          | 440                           | EP8322         |
| 6                           | 60                            | EP8311         | 45                          | 450                           | EP8309         |
| 7.5                         | 75                            | EP8317         | 47                          | 470                           | EP8323         |
| 10                          | 100                           | EP8302         | 50                          | 500                           | EP8310         |
| 12.5                        | 125                           | EP8319         | 55                          | 550                           | EP8330         |
| 15                          | 150                           | EP8303         | 60                          | 600                           | EP8324         |
| 17.5                        | 175                           | EP8320         | 65                          | 650                           | EP8331         |
| 20                          | 200                           | EP8304         | 70                          | 700                           | EP8325         |
| 22.5                        | 225                           | EP8321         | 75                          | 750                           | EP8329         |
| 25                          | 250                           | EP8305         | 80                          | 800                           | EP8326         |
| 30                          | 300                           | EP8306         | 85                          | 850                           | EP8332         |
| 35                          | 350                           | EP8307         | 90                          | 900                           | EP8327         |
| 40                          | 400                           | EP8308         | 95                          | 950                           | EP8333         |
| 42                          | 420                           | EP8318         | 100                         | 1000                          | EP8328         |

† Whichever is greater. Delay times referenced from input to leading edges at 25°C, 5.0V, with no load.

| DC Electrical Characteristics |                              |                                                                     |             |      |
|-------------------------------|------------------------------|---------------------------------------------------------------------|-------------|------|
| Parameter                     | Test Conditions              | Min                                                                 | Max         | Unit |
| V <sub>OH</sub>               | High-Level Output Voltage    | V <sub>CC</sub> = min. V <sub>IL</sub> = max. I <sub>OH</sub> = max | 2.7         | V    |
| V <sub>OL</sub>               | Low-Level Output Voltage     | V <sub>CC</sub> = min. V <sub>IH</sub> = min. I <sub>OL</sub> = max | 0.5         | V    |
| V <sub>IK</sub>               | Input Clamp Voltage          | V <sub>CC</sub> = min. I <sub>I</sub> = I <sub>IK</sub>             | -1.2V       | V    |
| I <sub>IH</sub>               | High-Level Input Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 2.7V                       | 50          | µA   |
|                               |                              | V <sub>CC</sub> = max. V <sub>IN</sub> = 5.25V                      | 1.0         | mA   |
| I <sub>IL</sub>               | Low-Level Input Current      | V <sub>CC</sub> = max. V <sub>IN</sub> = 0.5V                       | -2          | mA   |
| I <sub>OS</sub>               | Short Circuit Output Current | V <sub>CC</sub> = max. V <sub>OUT</sub> = 0.                        | -100        | mA   |
|                               | (One output at a time)       |                                                                     |             |      |
| I <sub>CCH</sub>              | High-Level Supply Current    | V <sub>CC</sub> = max. V <sub>IN</sub> = OPEN                       | 150         | mA   |
| I <sub>CCL</sub>              | Low-Level Supply Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 0                          | 150         | mA   |
| T <sub>RO</sub>               | Output Rise Time             | T <sub>d</sub> ≤ 500 nS (0.75 to 2.4 Volts)                         | 4           | nS   |
|                               |                              | T <sub>d</sub> > 500 nS                                             | 5           | nS   |
| N <sub>H</sub>                | Fanout High-Level Output     | V <sub>CC</sub> = max. V <sub>OH</sub> = 2.7V                       | 20 TTL LOAD |      |
| N <sub>L</sub>                | Fanout Low-Level Output      | V <sub>CC</sub> = max. V <sub>OL</sub> = 0.5V                       | 10 TTL LOAD |      |

## Schematic

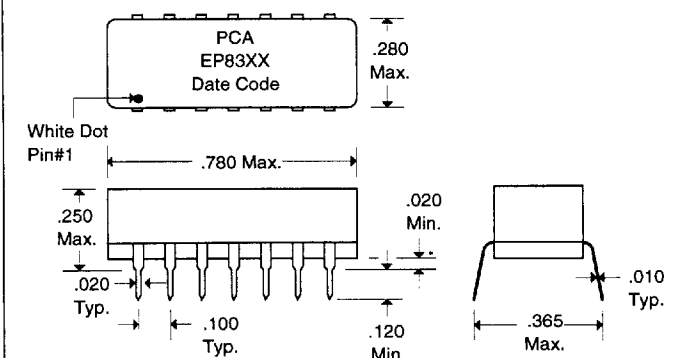


| Recommended Operating Conditions |                                | Min  | Max  | Unit |
|----------------------------------|--------------------------------|------|------|------|
| V <sub>CC</sub>                  | Supply Voltage                 | 4.75 | 5.25 | V    |
| V <sub>IH</sub>                  | High-Level Input Voltage       | 2.0  |      | V    |
| V <sub>IL</sub>                  | Low-Level Input Voltage        |      | 0.8  | V    |
| I <sub>IK</sub>                  | Input Clamp Current            |      | -18  | mA   |
| I <sub>OH</sub>                  | High-Level Output Current      |      | -1.0 | mA   |
| I <sub>OL</sub>                  | Low-Level Output Current       |      | 20   | mA   |
| PW*                              | Pulse Width of Total Delay     | 40   |      | %    |
| d*                               | Duty Cycle                     |      | 40   | %    |
| T <sub>A</sub>                   | Operating Free-Air Temperature | 0    | +70  | °C   |

\*These two values are inter-dependent.

| Input Pulse Test Conditions @ 25° C |                                                 |     | Unit  |
|-------------------------------------|-------------------------------------------------|-----|-------|
| E <sub>IN</sub>                     | Pulse Input Voltage                             | 3.2 | Volts |
| PW                                  | Pulse Width % of Total Delay                    | 110 | %     |
| T <sub>RI</sub>                     | Pulse Rise Time (0.75 - 2.4 Volts)              | 2.0 | nS    |
| PRR                                 | Pulse Repetition Rate @ T <sub>d</sub> ≤ 200 nS | 1.0 | MHz   |
|                                     | Pulse Repetition Rate @ T <sub>d</sub> > 200 nS | 100 | KHz   |
| V <sub>CC</sub>                     | Supply Voltage                                  | 5.0 | Volts |

## Package Dimensions



DSD83XX Rev. A 2/5/96

6852109 0000592 840

QAF-CSO1 Rev. B 8/25/94

Unless Otherwise Noted Dimensions in Inches

Tolerances:

Fractional = ± 1/32

.XX = ± .030 .XXX = ± .010



16799 SCHOENBORN ST.  
NORTH HILLS, CA 91343  
TEL: (818) 892-0761  
FAX: (818) 894-5791

33