

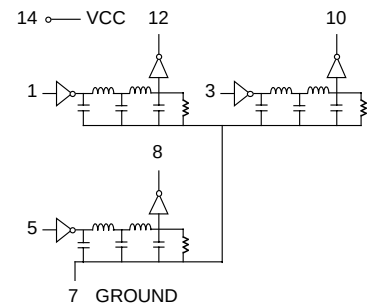
## 14 Pin DIP High Precision Triple Output TTL Compatible Active Delay Lines

| DELAY TIME<br>( nS ) | PART<br>NUMBER | DELAY TIME<br>( nS ) | PART<br>NUMBER | DELAY TIME<br>( nS ) | PART<br>NUMBER |
|----------------------|----------------|----------------------|----------------|----------------------|----------------|
| 5±1                  | EPA1825-5      | 19±1                 | EPA1825-19     | 65±2.5               | EPA1825-65     |
| 6±1                  | EPA1825-6      | 20±1                 | EPA1825-20     | 70±2.5               | EPA1825-70     |
| 7±1                  | EPA1825-7      | 21±1                 | EPA1825-21     | 75±2.5               | EPA1825-75     |
| 8±1                  | EPA1825-8      | 22±1                 | EPA1825-22     | 80±2.5               | EPA1825-80     |
| 9±1                  | EPA1825-9      | 23±1                 | EPA1825-23     | 85±3                 | EPA1825-85     |
| 10±1                 | EPA1825-10     | 24±1                 | EPA1825-24     | 90±3                 | EPA1825-90     |
| 11±1                 | EPA1825-11     | 25±1                 | EPA1825-25     | 95±3                 | EPA1825-95     |
| 12±1                 | EPA1825-12     | 30±1.5               | EPA1825-30     | 100±3                | EPA1825-100    |
| 13±1                 | EPA1825-13     | 35±1.5               | EPA1825-35     | 125±4                | EPA1825-125    |
| 14±1                 | EPA1825-14     | 40±1.5               | EPA1825-40     | 150±4.5              | EPA1825-150    |
| 15±1                 | EPA1825-15     | 45±2                 | EPA1825-45     | 175±5                | EPA1825-175    |
| 16±1                 | EPA1825-16     | 50±2                 | EPA1825-50     | 200±6                | EPA1825-200    |
| 17±1                 | EPA1825-17     | 55±2                 | EPA1825-55     | 225±7                | EPA1825-225    |
| 18±1                 | EPA1825-18     | 60±2                 | EPA1825-60     | 250±8                | EPA1825-250    |

*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.                        | -40 | -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                       |     | 115   | mA       |
| I <sub>CCL</sub>              | Low-Level Supply Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 0                          |     | 115   | mA       |
| T <sub>RO</sub>               | Output Rise Time             | T <sub>d</sub> ≤ 500 nS (0.75 to 2.4 Volts)                         |     | 4     | 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

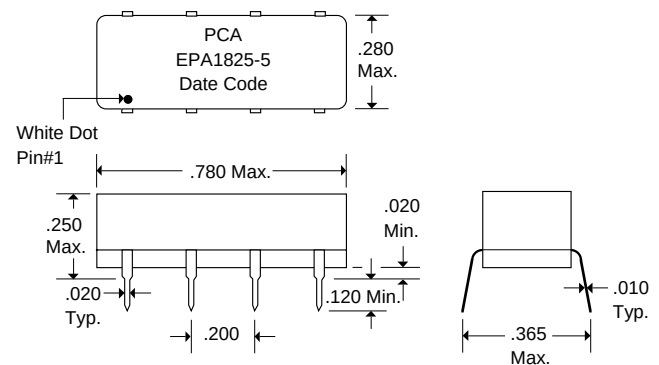


| Recommended Operating Conditions |                                | Min  | Max  | Unit |
|----------------------------------|--------------------------------|------|------|------|
| V <sub>CC</sub>                  | Supply Voltage                 | 4.75 | 5.25 | V    |
| V <sub>IH</sub>                  | 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 |
| P <sub>W</sub>                      | Pulse Width % of Total Delay                    | 110 | %     |
| T <sub>RI</sub>                     | Pulse Rise Time (0.75 - 2.4 Volts)              | 2.0 | nS    |
| P <sub>RR</sub>                     | 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



DSA1825 8/25/94

OAF-CS01 Rev. B 8/25/94

Unless Otherwise Noted Dimensions in Inches

Otherwise Noted Dimensions in  
Tolerances:  
Fractional =  $\pm 1/32$   
.XX =  $\pm .030$       .XXX =  $\pm .010$



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