

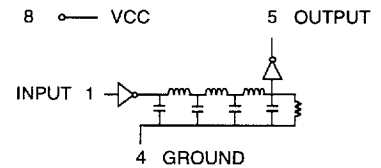
# Mini DIP Single Output TTL Compatible Active Delay Lines

| TIME DELAY (ns)<br>±5% or ±2 nS† | PART<br>NUMBER | TIME DELAY (ns)<br>±5% or ±2 nS† | PART<br>NUMBER |
|----------------------------------|----------------|----------------------------------|----------------|
| 5                                | EP9460-5       | 60                               | EP9460-60      |
| 10                               | EP9460-10      | 75                               | EP9460-75      |
| 15                               | EP9460-15      | 100                              | EP9460-100     |
| 20                               | EP9460-20      | 125                              | EP9460-125     |
| 25                               | EP9460-25      | 150                              | EP9460-150     |
| 30                               | EP9460-30      | 175                              | EP9460-175     |
| 35                               | EP9460-35      | 200                              | EP9460-200     |
| 40                               | EP9460-40      | 225                              | EP9460-225     |
| 45                               | EP9460-45      | 250                              | EP9460-250     |
| 50                               | EP9460-50      |                                  |                |

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

| DC Electrical Characteristics |                              |   | Min | Max         | Unit |
|-------------------------------|------------------------------|---|-----|-------------|------|
| Parameter                     | Test Conditions              |   |     |             |      |
| 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>             |     | -1.2        | 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   |
| I <sub>CCH</sub>              | High-Level Supply Current    | V <sub>CC</sub> = max. V <sub>IN</sub> = OPEN                       |     | 75          | mA   |
| I <sub>CCL</sub>              | Low-Level Supply Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 0                          |     | 75          | 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 |      |

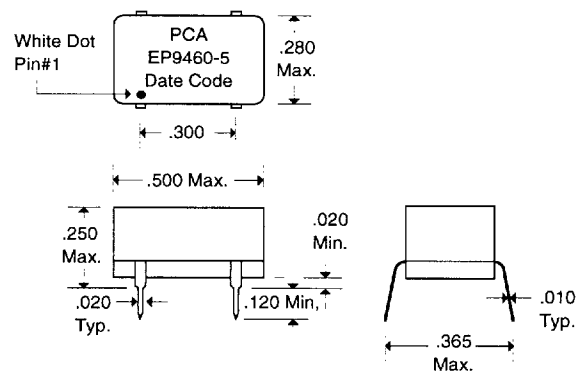
## Schematic



| 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.

## Package Dimensions



| 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 |

DSD9460 Rev. A 2/5/96

QAF-CS01 Rev. B 8/25/94

Unless Otherwise Noted Dimensions in Inches

Tolerances:

Fractional = ± 1/32

.XX = ± .030 .XXX = ± .010



6852109 0000564 986

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

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