

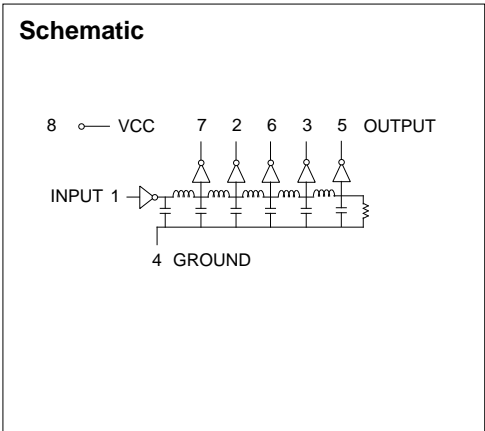
# 8 Pin DIP 5 Tap Fast-TTL Logic Compatible Active Delay Lines

| 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 |
|----------------------------|------------------------------|----------------|----------------------------|------------------------------|----------------|
| *1, 2, 3 (±0.5)            | 4±1.0                        | EPA770-4       | 30, 60, 90, 120            | 150                          | EPA770-150     |
| *2, 4, 6 (±1.0)            | 8                            | EPA770-8       | 35, 70, 105, 140           | 175                          | EPA770-175     |
| *3, 6, 9 (±1.0)            | 12                           | EPA770-12      | 40, 80, 120, 160           | 200                          | EPA770-200     |
| 4, 8, 12, 16 (±1.5)        | 20                           | EPA770-20      | 45, 90, 135, 180           | 225                          | EPA770-225     |
| 5, 10, 15, 20              | 25                           | EPA770-25      | 50, 100, 150, 200          | 250                          | EPA770-250     |
| 10, 20, 30, 40             | 50                           | EPA770-50      | 60, 120, 180, 240          | 300                          | EPA770-300     |
| 12, 24, 36, 48             | 60                           | EPA770-60      | 70, 140, 210, 280          | 350                          | EPA770-350     |
| 15, 30, 45, 60             | 75                           | EPA770-75      | 80, 160, 240, 320          | 400                          | EPA770-400     |
| 20, 40, 60, 80             | 100                          | EPA770-100     | 90, 180, 270, 360          | 450                          | EPA770-450     |
| 25, 50, 75, 100            | 125                          | EPA770-125     | 100, 200, 300, 400         | 500                          | EPA770-500     |

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

\*Delay times referenced from 1st tap. 1st tap is the inherent delay (3.5ns ±1nS)

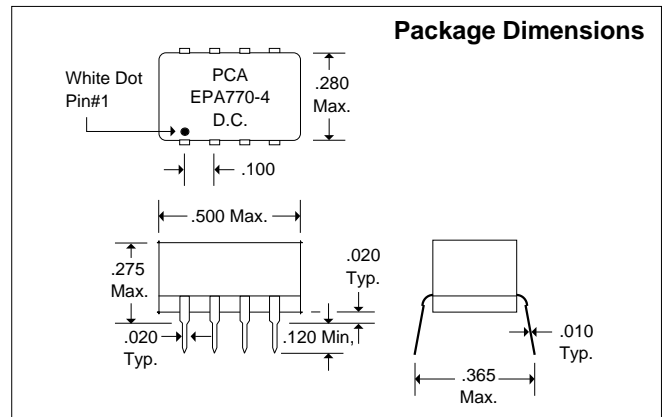
| DC Electrical Characteristics |                              |   |     |             |    |
|-------------------------------|------------------------------|---|-----|-------------|----|
| Parameter                     | Test Conditions              | Min   | Max | Unit        |    |
| V <sub>OH</sub>               | 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>             |     | -1.2        | 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                       |     | -0.6        | mA |
| I <sub>OS</sub>               | Short Circuit Output Current | V <sub>CC</sub> = max. V <sub>OUT</sub> = 0.                        | -40 | -150        | mA |
|                               |                              | (One output at a time)  |     |             |    |
| I <sub>CCH</sub>              | High-Level Supply Current    | V <sub>CC</sub> = max. V <sub>IN</sub> = OPEN                       |     | 15          | mA |
| I <sub>CCL</sub>              | Low-Level Supply Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 0                          |     | 50          | mA |
| T <sub>RO</sub>               | Output Rise Time             | T <sub>d</sub> 500 nS (0.75 to 2.4 Volts)                           |     | 3           | nS |
|                               |                              | T <sub>d</sub> > 500 nS   |     | 3           | 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 |    |



| 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 |



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