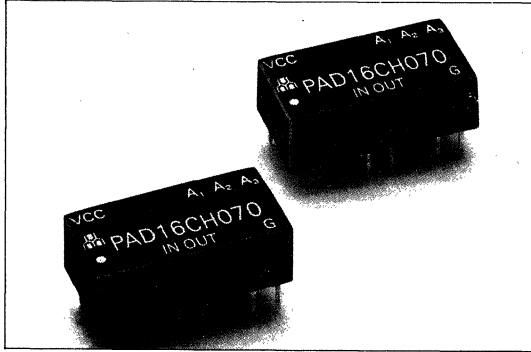




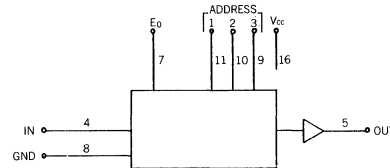
# PAD16CH SERIES: 16-PIN DIL PROGRAMMABLE, 3 BIT, 8 DELAY STEPS, TTL COMPATIBLE



### FEATURES

- Digitally Programmable in 8 Delay Steps
- Delay Increments of 1/2 ns Thru 70 ns
- Fits in Standard 16-pin DIL
- Operating Temperature Range: 0°C to +70°C
- Output Fully TTL Interfaced
- Output Pulse Polarity Same as Input.

### CIRCUIT CONFIGURATION:



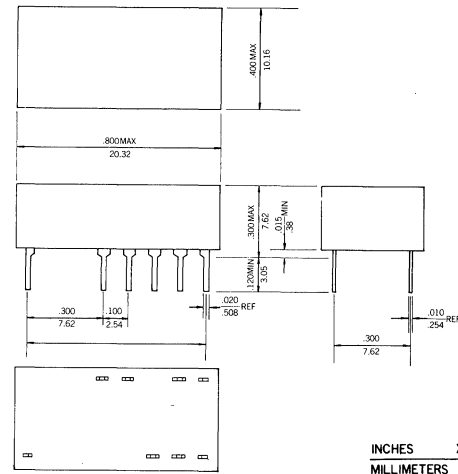
### ELECTRICAL CHARACTERISTICS

Supply Voltage  $V_{cc}$ :  $5.0 \pm 0.25$  VDC  
 Logic 1 Input Voltage: 2.0 V min  
 Input Current: 50  $\mu$ A max  
 Logic 0 Input Voltage: 0.8 V max  
 Input Current: -2.0 mA max  
 Logic 1 Output Voltage: 2.4V min  
 Logic 0 Output Current: 0.5 V max  
 Inherent Delay: 7 NS  $\pm$  1 NS  
 Propagation Delay: Address to Output: 12 ns Typical  
 Enable to Output: 12 ns Typical  
 All Measurements Made at  $V_{cc}$  = 5.0V, 25°C

### INPUT TEST CONDITIONS

Pulse Voltage: 3.2 V  
 Rise Time: 3.0 ns  
 Supply Current: 60 mA typical  
 Pulse Width: min. of 100% total delay  
 Duty Cycle: 33% or less

### PACKAGE DIMENSIONS:



### ELECTRICAL SPECIFICATIONS:

| PART NO.   | DELAY ns min | DELAY ns max | DELAY PER STEP ns | TOLERANCE PER STEP ns |
|------------|--------------|--------------|-------------------|-----------------------|
| PAD16CH007 | 7 $\pm$ 1    | 14           | 1 $\pm$ .5        | $\pm$ .8              |
| PAD16CH014 | 7 $\pm$ 1    | 21           | 2 $\pm$ .6        | $\pm$ 1.2             |
| PAD16CH021 | 7 $\pm$ 1    | 28           | 3 $\pm$ .7        | $\pm$ 1.6             |
| PAD16CH028 | 7 $\pm$ 1    | 35           | 4 $\pm$ .8        | $\pm$ 1.8             |
| PAD16CH035 | 7 $\pm$ 1    | 42           | 5 $\pm$ 1.0       | $\pm$ 2.0             |
| PAD16CH042 | 7 $\pm$ 1    | 49           | 6 $\pm$ 1.2       | $\pm$ 2.4             |
| PAD16CH049 | 7 $\pm$ 1    | 56           | 7 $\pm$ 1.4       | $\pm$ 2.8             |
| PAD16CH056 | 7 $\pm$ 1    | 63           | 8 $\pm$ 1.6       | $\pm$ 3.2             |
| PAD16CH063 | 7 $\pm$ 1    | 70           | 9 $\pm$ 1.8       | $\pm$ 3.6             |
| PAD16CH070 | 7 $\pm$ 1    | 77           | 10 $\pm$ 2.0      | $\pm$ 4.0             |

### TRUTH TABLE

| ENABLE | ADDRESS (BIT NO.) |   |   | DELAY OUT      | 1=High<br>0=Low<br>=Don't care<br>T <sub>0</sub> =Reference or Inherent delay of circuit<br>T <sub>1</sub> to T <sub>7</sub> =Multiplier of Incremental delay. |
|--------|-------------------|---|---|----------------|--|
|        | 3                 | 2 | 1 |                |  |
| 0      | 0                 | 0 | 0 | T <sub>0</sub> |  |
| 0      | 0                 | 0 | 1 | T <sub>1</sub> |  |
| 0      | 0                 | 1 | 0 | T <sub>2</sub> |  |
| 0      | 0                 | 1 | 1 | T <sub>3</sub> |  |
| 0      | 1                 | 0 | 0 | T <sub>4</sub> |  |
| 0      | 1                 | 0 | 1 | T <sub>5</sub> |  |
| 0      | 1                 | 1 | 0 | T <sub>6</sub> |  |
| 0      | 1                 | 1 | 1 | T <sub>7</sub> |  |
| 1      |                   |   |   |                |  |