

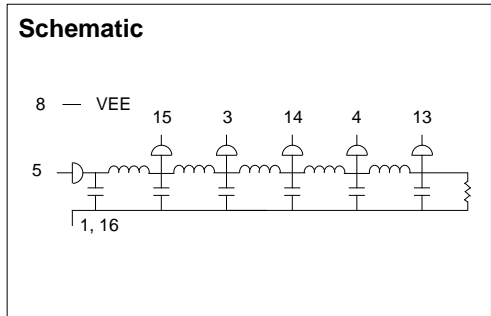
# 16 Pin DIL 5 Tap 10K ECL Compatible Active Delay Lines

| TAP 1<br>nS ±5% | TAP 2<br>nS ±5% | TAP 3<br>nS ±5% | TAP 4<br>nS ±5% | OUTPUT<br>nS ±5% | RISE TIME<br>nS MAX | PART<br>NUMBER |
|-----------------|-----------------|-----------------|-----------------|------------------|---------------------|----------------|
| 3.0 Typ†        | 4 ± 0.3         | 5 ± 0.3         | 6 ± 0.3         | 7 ± 0.3          | 4                   | EP9445-7       |
| 3.0 Typ†        | 5 ± 0.5         | 7 ± 0.5         | 9 ± 0.5         | 11 ± 0.5         | 4                   | EP9445-11      |
| 3.0 Typ         | 6 ± 0.5         | 9 ± 0.5         | 12 ± 1.0        | 15 ± 1.5         | 4                   | EP9445-15      |
| 4 ± 1.0         | 8 ± 0.5         | 12 ± 1.0        | 16 ± 1.5        | 20 ± 2.0         | 4                   | EP9445-20      |
| 5 ± 1.0         | 10 ± 1.0        | 15 ± 1.5        | 20 ± 2.0        | 25 ± 2.0         | 4                   | EP9445-25      |
| 6 ± 1.0         | 12 ± 1.0        | 18 ± 1.5        | 24 ± 2.0        | 30 ± 2.0         | 4                   | EP9445-30      |
| 8 ± 1.0         | 16 ± 1.5        | 24 ± 2.0        | 32 ± 2.0        | 40               | 5                   | EP9445-40      |
| 10 ± 1.0        | 20 ± 2.0        | 30 ± 2.0        | 40              | 50               | 5                   | EP9445-50      |
| 15 ± 1.5        | 30 ± 2.0        | 45              | 60              | 75               | 8                   | EP9445-75      |
| 20 ± 2.0        | 40              | 60              | 80              | 100              | 10                  | EP9445-100     |
| 30 ± 2.0        | 60              | 90              | 120             | 150              | 15                  | EP9445-150     |
| 40              | 80              | 120             | 160             | 200              | 20                  | EP9445-200     |
| 50              | 100             | 150             | 200             | 250              | 25                  | EP9445-250     |
| 60              | 120             | 180             | 240             | 300              | 30                  | EP9445-300     |
| 70              | 140             | 210             | 280             | 350              | 35                  | EP9445-350     |
| 80              | 160             | 240             | 320             | 400              | 40                  | EP9445-400     |
| 90              | 180             | 270             | 360             | 450              | 45                  | EP9445-450     |
| 100             | 200             | 300             | 400             | 500              | 50                  | EP9445-500     |
| 120             | 240             | 360             | 480             | 600              | 50                  | EP9445-600     |
| 140             | 280             | 420             | 560             | 700              | 50                  | EP9445-700     |
| 160             | 320             | 480             | 640             | 800              | 50                  | EP9445-800     |
| 180             | 360             | 520             | 720             | 900              | 50                  | EP9445-900     |
| 200             | 400             | 600             | 800             | 1000             | 50                  | EP9445-1000    |

Delay time measured at -1.3V, no load  
 Delay times referenced from input to leading edges  
 †Inherent delay

Rise time output measured from 20% to 80%  
 Output terminated (externally) with 50 Ω to -2.0Vdc

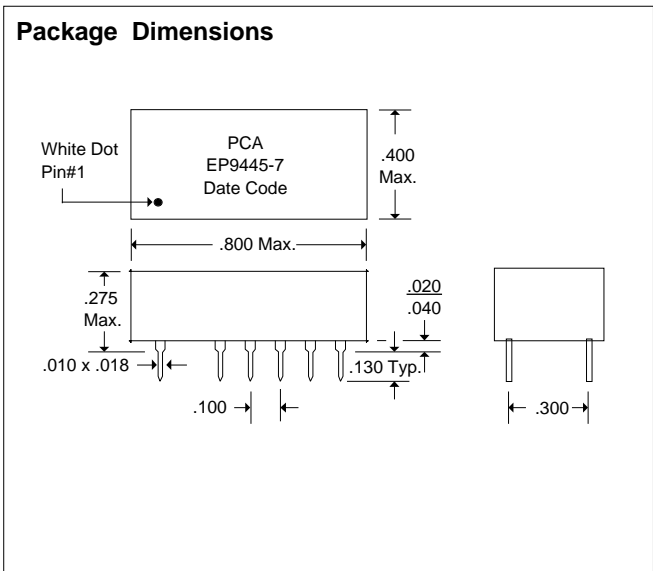
| DC Electrical Characteristics |                                     | *Test Conditions      | Min  | Max   | Unit |
|-------------------------------|-------------------------------------|-----------------------|------|-------|------|
| VOH                           | High-Level Output Voltage           | V <sub>IL</sub> = Min | -960 |       | mV   |
| VOHT                          | High-Level Output Threshold Voltage |                       | -980 |       | mV   |
| VOLT                          | Low-Level Output Threshold Voltage  |                       |      | -1630 | mV   |
| VOH                           | Low-Level Output Voltage            | V <sub>IH</sub> = Max |      | -1650 | mV   |
| I <sub>IH</sub>               | High-Level Input Current            | V <sub>IH</sub> = Max |      | 265   | μA   |
| I <sub>IL</sub>               | Low-Level Input Current             | V <sub>IL</sub> = Min | 0.5  |       | μA   |
| I <sub>EE</sub>               | V <sub>EE</sub> Supply Current      |                       |      | 50    | mA   |



\* (V<sub>CC1</sub> = V<sub>CC2</sub> = GRD, V<sub>EE</sub> = -5.2V ± 0.01V, Output Loading with 50 Ω to -2.0V ± 0.01V)

| Recommended Operating Conditions |                                    | Min  | Max   | Unit |
|----------------------------------|------------------------------------|------|-------|------|
| V <sub>EE</sub>                  | Supply Voltage (Negative)          | 4.94 | 5.46  | V    |
| V <sub>CC</sub>                  | Circuit Ground (Pins 1 and 16)     | 0    | 0     | V    |
| V <sub>IH</sub>                  | High-Level Input Voltage           | -980 |       | mV   |
| V <sub>IHT</sub>                 | High-Level Input Threshold Voltage |      | -1105 | mV   |
| V <sub>ILT</sub>                 | Low-Level Input Threshold Voltage  |      | -1475 | mV   |
| V <sub>IL</sub>                  | Low-Level Input Voltage            |      | -1630 | mV   |
| P <sub>W</sub> *                 | Pulse Width of Total Delay         | 300  |       | %    |
| d*                               | Duty Cycle                         |      | 20    | %    |
| T <sub>A</sub>                   | Operating Free-Air Temperature     | -30  | +80   | °C   |

\*These two values are inter-dependent.



| Input Pulse Test Conditions @ 25° C |                              |                          |
|-------------------------------------|------------------------------|--------------------------|
| V <sub>IN</sub>                     | Pulse Input Voltage          | -1.0V (-0.75 to -1.75V)  |
| P <sub>W</sub>                      | Pulse Width of Total Delay   | 3x Total Delay           |
| T <sub>RI</sub>                     | Pulse Rise Time (20% to 80%) | 2 nS                     |
| P <sub>RR</sub>                     | Pulse Spacing                | 10x Total T <sub>d</sub> |
| V <sub>EE</sub>                     | Supply Voltage               | -5.2V                    |

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Unless Otherwise Noted Dimensions in Inches  
 Tolerances:  
 Fractional = ± 1/32  
 .XX = ± .030 .XXX = ± .010



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