

100K ECL Logic 4-Bit Programmable Delay Modules

ELECTRICAL SPECIFICATIONS @ 25°C

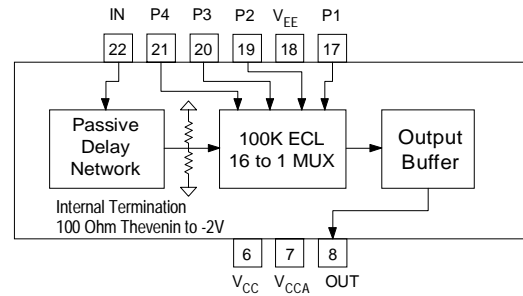
Inherent Delay Time (Step 0) 2.00 ns ± 0.50 ns
 Delay Per Programming Step See Table
 Maximum Programming Delay 2 ns + (15 x Step)
 Output Rise Time (20% to 80%) 2.00 ns Max.

OPERATING SPECIFICATIONS

V_{EE} , Supply Voltage -4.2 to -5.7VDC
 I_{EE} , Supply Current 95 mA typ.
 Logic "1" Input: V_{IH} -1.165V min.
 I_{IH} 300 µA max.
 Logic "0" Input: V_{IL} -1.475V max.
 I_{IL} 0.5 µA min.
 V_{OH} Logic "1" Voltage Out -1.025 V min.
 V_{OL} Logic "0" Voltage Out -1.620V max.
 Storage Temperature Range -55° to +125°C
 Operating Temperature Range 0° to +85°C

** Pin 22, Input is internally connected to 16 standard 100K inputs and is internally terminated by Thevenin equivalent of 100 Ohms to -2V.

Schematic Diagram

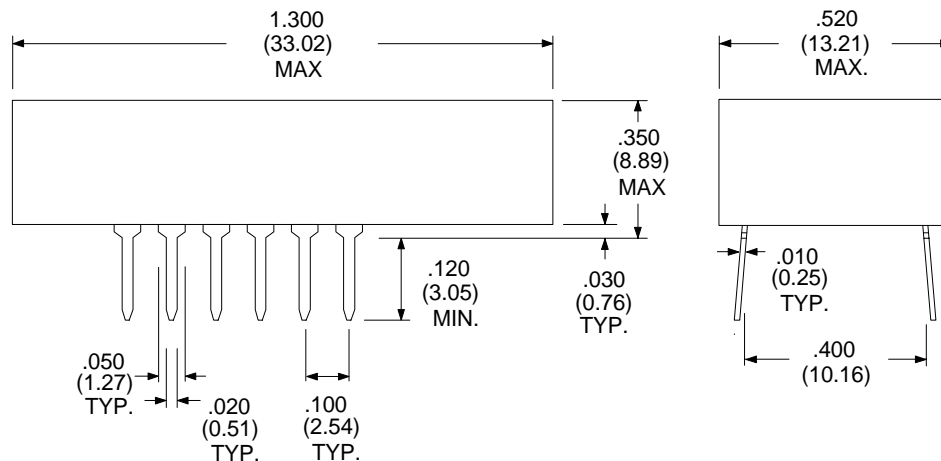


TEST CONDITIONS

V_{EE} Supply Voltage -4.50 VDC
 Input Pulse Rise Time 2.0ns max.
 Input Pulse Frequency 10 MHz
 Input Pulse Duty Cycle 50%
 1. Measurements made at 25 °C
 2. Output Terminated through 50 ohms to -2.00 VDC.
 3. Delays measured at 50% level of leading edge.

| 4-Bit Prog. 100K ECL Part Number | Delay per Step (ns) | Error ref. to 0000 (ns) | Initial Delay (ns) | Output Delay (ns) Referenced to "0000" per Program Setting (P4*P3*P2*P1) | | | | | | | | | | | | | | | |
|----------------------------------|---------------------|-------------------------|--------------------|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | 0000 | 0001 | 0010 | 0011 | 0100 | 0101 | 0110 | 0111 | 1000 | 1001 | 1010 | 1011 | 1100 | 1101 | 1110 | 1111 |
| PPECL2P25 | 0.25 ± .12 | ± 0.50 | 2.0 ± 0.5 | 0.00 | 0.25 | 0.50 | 0.75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 3.00 | 3.25 | 3.50 | 3.75 |
| PPECL2P50 | 0.50 ± .25 | ± 0.50 | 2.0 ± 0.5 | 0.00 | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 | 4.50 | 5.00 | 5.50 | 6.00 | 6.50 | 7.00 | 7.50 |
| PPECL2P75 | 0.75 ± .35 | ± 1.0 | 2.0 ± 0.5 | 0.00 | 0.75 | 1.50 | 2.25 | 3.00 | 3.75 | 4.50 | 5.25 | 6.00 | 6.75 | 7.50 | 8.25 | 9.00 | 9.75 | 10.50 | 11.25 |
| PPECL2-1 | 1.00 ± .50 | ± 1.0 | 2.0 ± 0.5 | 0.00 | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 | 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 |
| PPECL2-1.25 | 1.25 ± .60 | ± 1.0 | 2.0 ± 0.5 | 0.00 | 1.25 | 2.50 | 3.75 | 5.00 | 6.25 | 7.50 | 8.75 | 10.00 | 11.25 | 12.50 | 13.75 | 15.00 | 16.25 | 17.50 | 18.75 |
| PPECL2-1.5 | 1.50 ± .60 | ± 1.0 | 2.0 ± 0.5 | 0.00 | 1.50 | 3.00 | 4.50 | 6.00 | 7.50 | 9.00 | 10.50 | 12.00 | 13.50 | 15.00 | 16.50 | 18.00 | 19.50 | 21.00 | 22.50 |
| PPECL2-2 | 2.00 ± .70 | ± 1.5 | 2.0 ± 0.5 | 0.00 | 2.00 | 4.00 | 6.00 | 8.00 | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 | 20.00 | 22.00 | 24.00 | 26.00 | 28.00 | 30.00 |
| PPECL2-2.5 | 2.50 ± .70 | ± 1.5 | 2.0 ± 0.5 | 0.00 | 2.50 | 5.00 | 7.50 | 10.00 | 12.50 | 15.00 | 17.50 | 20.00 | 22.50 | 25.00 | 27.50 | 30.00 | 32.50 | 35.00 | 37.50 |
| PPECL2-3 | 3.00 ± .70 | ± 1.5 | 2.0 ± 0.5 | 0.00 | 3.00 | 6.00 | 9.00 | 12.00 | 15.00 | 18.00 | 21.00 | 24.00 | 27.00 | 30.00 | 33.00 | 36.00 | 39.00 | 42.00 | 45.00 |
| PPECL2-4 | 4.00 ± .80 | ± 3.0 | 2.0 ± 0.5 | 0.00 | 4.00 | 8.00 | 12.00 | 16.00 | 20.00 | 24.00 | 28.00 | 32.00 | 36.00 | 40.00 | 44.00 | 48.00 | 52.00 | 56.00 | 60.00 |
| PPECL2-5 | 5.00 ± 1.0 | ± 3.0 | 2.0 ± 0.5 | 0.00 | 5.00 | 10.00 | 15.00 | 20.00 | 25.00 | 30.00 | 35.00 | 40.00 | 45.00 | 50.00 | 55.00 | 60.00 | 65.00 | 70.00 | 75.00 |

24-Pin Package with Unused Pins Removed per Schematic. Dimensions inches (mm)



Specifications subject to change without notice.

For other values & Custom Designs, contact factory.

PPECL2 9901



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