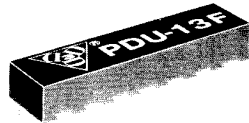


# Fast Logic Programmable Delay Lines

SERIES: PDU-13F

(3 BIT) T<sup>2</sup>L Interfaced

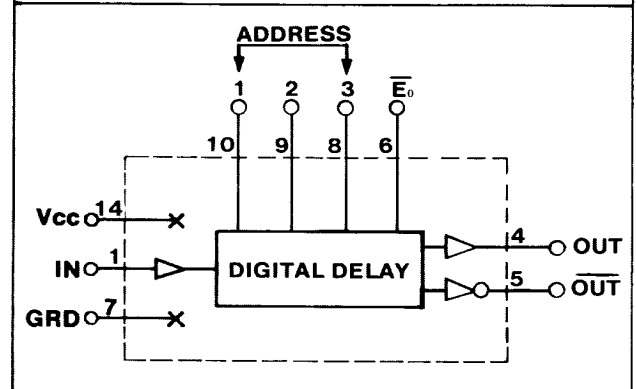
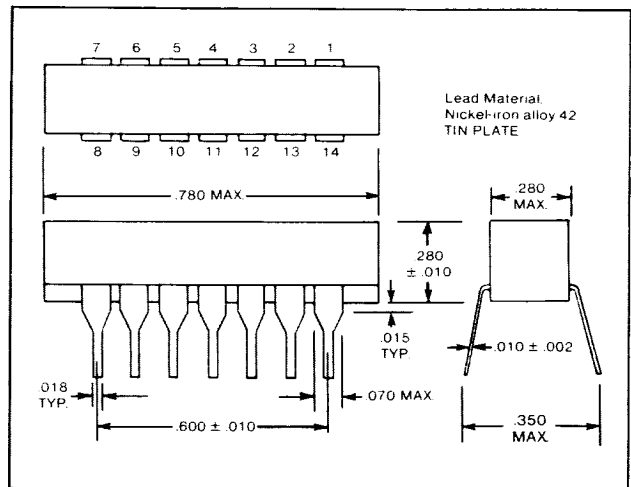


## Features:

- Digitally programmable in 8 delay steps.
- Fits standard 14 pins DIP socket.
- Input & outputs fully TTL interfaced & buffered.
- Two (2) separate outputs; inverting & non-inverting.
- Precise and stable delays.
- 10 T<sup>2</sup>L fan-out capability.
- Auto-insertable.

## Specifications:

- Input signal requirement: TTL logic.
- Output fan-out: TTL Schottky loads.
- Delay variation: Monotonic in one direction.
- Total programmed delay tolerance: 5% or 1 NS whichever is greater.
- Inherent delay (T<sub>DO</sub>): 4.5 NS on pin 4 } typical  
5.5 NS on pin 5 }
- Propagation delay:  
Address to output (T<sub>SUA</sub>) = 7 NS typ.  
Enable to output (T<sub>SUE</sub>) = 6 NS typ.
- Operating temperature: 0° to 70° C.
- Temperature coefficient: 100 PPM/° C.
- Supply voltage V<sub>CC</sub>: 5 Vdc ± 5%.
- Supply current: I<sub>CCH</sub> = 20 MA  
I<sub>CCL</sub> = 45 MA
- Minimum pulse-width = 20% of total delay.



TRUTH TABLE

Enable	Address (Bit No.)			Delay Out	1 = High 0 = Low φ = Don't care T <sub>0</sub> = Reference or inherent delay of circuit. 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	φ	φ	φ	0	

Part Number	Incremental Delay Per Step	Total Delay* Change
PDU-13F-5	.5 NS ± .3 NS	3.5 NS
PDU-13F-1	1 NS ± .4 NS	7 NS
PDU-13F-2	2 NS ± .4 NS	14 NS
PDU-13F-3	3 NS ± .5 NS	21 NS
PDU-13F-5	5 NS ± .6 NS	35 NS
PDU-13F-10	10 NS ± 1.0 NS	70 NS
PDU-13F-15	15 NS ± 1.3 NS	105 NS
PDU-13F-20	20 NS ± 1.5 NS	140 NS
PDU-13F-40	40 NS ± 2.0 NS	280 NS
PDU-13F-50	50 NS ± 2.5 NS	350 NS

\*This delay value does not include T<sub>0</sub> delay.

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