

16 Pin DIP 3 Bit Programmable TTL Delay Lines (Auto-Insertable)

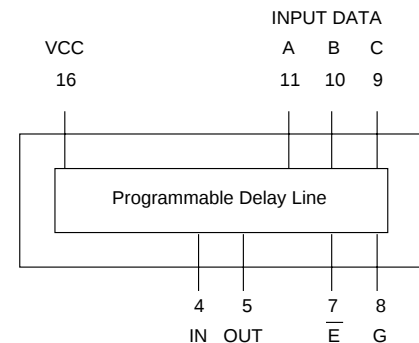
PART NUMBER	MIN DELAY ± 2 nS	MAX DELAY nS	STEP	OUTPUT DELAY TIME PROGRAMMING (nS)							
				DATA INPUT (CBA)							
				000	001	010	011	100	101	110	111
EP8076-1	7	14	1 ± 0.5 nS	7	8	9	10	11	12	13	14
EP8076-2	7	21	2 ± 0.5 nS	7	9	11	13	15	17	19	21
EP8076-3	7	28	3 ± 0.6 nS	7	10	13	16	19	22	25	28
EP8076-4	7	35	4 ± 0.8 nS	7	11	15	19	23	27	31	35
EP8076-5	7	42	5 ± 1.0 nS	7	12	17	22	27	32	37	42
EP8076-6	7	49	6 ± 1.0 nS	7	13	19	25	31	37	43	49
EP8076-7	7	56	7 ± 1.0 nS	7	14	21	28	35	42	49	56
EP8076-8	7	63	8 ± 1.0 nS	7	15	23	31	39	47	55	63
EP8076-9	7	70	9 ± 1.0 nS	7	16	25	34	43	52	61	70
EP8076-10	7	77	10 ± 1.0 nS	7	17	27	37	47	57	67	77

Max delay tolerances ± 2 nS or $\pm 5\%$ whichever is greater

All delays measured at 1.5V level on leading edge, no load (enable = "0"), at 25°C, 5.0Vdc

DC Electrical Characteristics					
Parameter	Test Conditions	Min	Max	Unit	
V_{OH}	High-Level Output Voltage	$V_{CC} = \min.$	$V_{IL} = \max.$	$I_{OH} = \max$	2.7
V_{OL}	Low-Level Output Voltage	$V_{CC} = \min.$	$V_{IH} = \min.$	$I_{OL} = \max$	0.5
V_{IK}	Input Clamp Voltage	$V_{CC} = \min.$	$I_I = I_{IK}$		-1.2
I_{IH}	High-Level Input Current	$V_{CC} = \max.$	$V_{IN} = 2.7V$		10
		$V_{CC} = \max.$	$V_{IN} = 5.25V$		15
I_{IL}	Low-Level Input Current	$V_{CC} = \max.$	$V_{IN} = 0.5V$		15
I_{OS}	Short Circuit Output Current	$V_{CC} = \max.$	$V_{OUT} = 0.$		-100
	(One output at a time)				
I_{CCH}	High-Level Supply Current	$V_{CC} = \max.$	$V_{IN} = \text{OPEN}$		45
I_{CCL}	Low-Level Supply Current	$V_{CC} = \max.$	$V_{IN} = 0$		90
T_{RO}	Output Rise Time	$T_d \leq 500$ nS	(0.75 to 2.4 Volts)		4
N_H	Fanout High-Level Output	$V_{CC} = \max.$	$V_{OH} = 2.7V$		20 TTL LOAD
N_L	Fanout Low-Level Output	$V_{CC} = \max.$	$V_{OL} = 0.5V$		10 TTL LOAD

Schematic



Recommended Operating Conditions		Min	Max	Unit
V_{CC}	Supply Voltage	4.75	5.25	V
V_{IH}	High-Level Input Voltage	2.0		V
V_{IL}	Low-Level Input Voltage		0.8	V
I_{IK}	Input Clamp Current		-18	mA
I_{OH}	High-Level Output Current		-1.0	mA
I_{OL}	Low-Level Output Current		20	mA
PW^*	Pulse Width of Total Delay	100		%
d^*	Duty Cycle		20	%
T_A	Operating Free-Air Temperature	0	+70	°C

*These two values are inter-dependent.

Input Pulse Test Conditions		Unit
E_{IN}	Pulse Input Voltage	3.2 Volts
PW	Pulse Width % of Total Delay	150 %
T_{RI}	Pulse Rise Time (0.75 - 2.4 Volts)	2.0 nS
PRR	Pulse Repetition Rate @ $T_d \leq 500$ nS	1.0 MHz
V_{CC}	Supply Voltage	5.0 Volts

Package

