8 Pin DIP Dual
TTL Compatible Active Delay Lines
EPA445-XX & EPA445-XX-LF

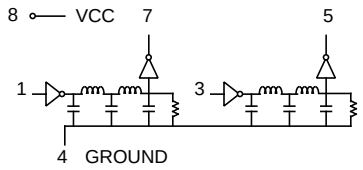
Add “-LF” after part number for Lead-Free

PCA Part Number	Delay Time *	PCA Part Number	Delay Time *	PCA Part Number	Delay Time *
EPA445-5(-LF)	5 ± 1	EPA445-18(-LF)	18	EPA445-55(-LF)	55
EPA445-6(-LF)	6 ± 1	EPA445-19(-LF)	19	EPA445-60(-LF)	60
EPA445-7(-LF)	7 ± 1	EPA445-20(-LF)	20	EPA445-65(-LF)	65
EPA445-8(-LF)	8 ± 1	EPA445-21(-LF)	21	EPA445-70(-LF)	70
EPA445-9(-LF)	9 ± 1	EPA445-22(-LF)	22	EPA445-75(-LF)	75
EPA445-10(-LF)	10 ± 1.5	EPA445-23(-LF)	23	EPA445-80(-LF)	80
EPA445-11(-LF)	11 ± 1.5	EPA445-24(-LF)	24	EPA445-85(-LF)	85
EPA445-12(-LF)	12 ± 1.5	EPA445-25(-LF)	25	EPA445-90(-LF)	90
EPA445-13(-LF)	13 ± 1.5	EPA445-30(-LF)	30	EPA445-95(-LF)	95
EPA445-14(-LF)	14 ± 1.5	EPA445-35(-LF)	35	EPA445-100(-LF)	100
EPA445-15(-LF)	15	EPA445-40(-LF)	40	EPA445-150(-LF)	150
EPA445-16(-LF)	16	EPA445-45(-LF)	45	EPA445-200(-LF)	200
EPA445-17(-LF)	17	EPA445-50(-LF)	50	EPA445-250(-LF)	250

Delay Times referenced from input to leading edges at 25℃, 5.0V, with no load.
** Unless otherwise specified, delay tolerance is ± 2 nS or ± 5%, whichwver is greater.*

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
V_{OL}	Low-Level Output Voltage	V_{CC} = min. V_{IH} = min. I_{OL} = max		0.5	V
V_{IK}	Input Clamp Voltage	V_{CC} = min. I_I = II_K		-1.2	V
I_{IH}	High-Level Input Current	V_{CC} = max. V_{IN} = 2.7V		50	µA
		V_{CC} = max. V_{IN} = 5.25V		1.0	mA
I_{IL}	Low-Level Input Current	V_{CC} = max. V_{IN} = 0.5V		-2	mA
I_{OS}	Short Circuit Output Current	V_{CC} = max. V_{OUT} = 0.	-40	-100	mA
		(One output at a time)			
I_{CCH}	High-Level Supply Current	V_{CC} = max. V_{IN} = OPEN		90	mA
I_{CCL}	Low-Level Supply Current	V_{CC} = max. V_{IN} = 0		90	mA
T_{RO}	Output Rise Time	Td ≤ 500 nS (0.75 to 2.4 Volts)		4	nS
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	

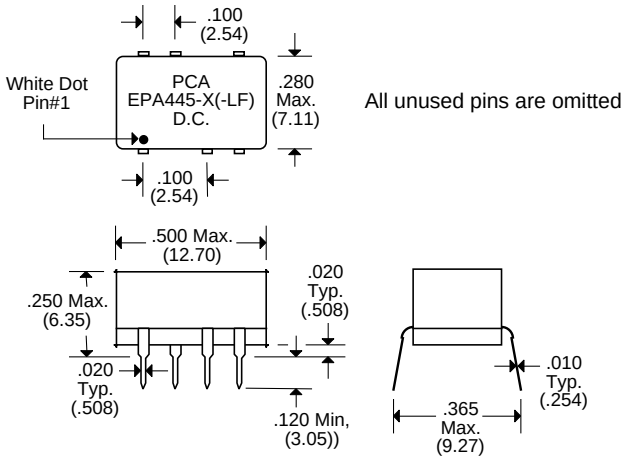
Schematic



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
P_W*	Pulse Width of Total Delay	40		%
d*	Duty Cycle		40	%
T_A	Operating Free-Air Temperature	0	+70	°C

**These two values are inter-dependent.*

Package



All unused pins are omitted

Input Pulse Test Conditions @ 25° C			Unit
E_{IN}	Pulse Input Voltage	3.2	Volts
P_W	Pulse Width % of Total Delay	110	%
T_{RI}	Pulse Rise Time (0.75 - 2.4 Volts)	2.0	nS
P_{RR}	Pulse Repetition Rate	1.0	MHz
V_{CC}	Supply Voltage	5.0	Volts

Notes :	EPA445-XX	EPA445-XX-LF
1. Lead Finish	SnPb	Hot Tin Dip (Sn)
2. Peak Solder Rating (Wave Solder Process)	260°C 10 (+2/-0) seconds	260°C 10 (+2/-0) seconds
4. Weight	TBD grams	TBD grams
5. Packaging Information (Tube)	TBD pieces/tube	TBD pieces/tube

Unless Otherwise Specified Dimensions are in Inches /mm ± .010 /.25

PCA ELECTRONICS, INC.
16799 SCHOENBORN ST.
NORTH HILLS, CA 91343

TEL: (818) 892-0761
FAX: (818) 894-5791
http://www.pca.com