

# 5 Tap High Speed CMOS (HCT) Compatible Active Delay Lines

## EP9604-XX & EP9604-XX-RC

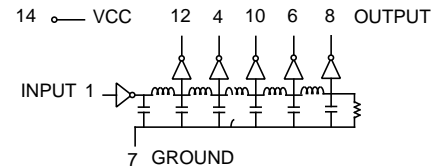
Add "-RC" after part number for RoHS Compliant

PCA Part Number	Tap Delays ( $\pm 5\%$ or $\pm 2\text{nS}$ )				Total Delay ( $\pm 5\%$ or $\pm 2\text{nS}$ )	PCA Part Number	Tap Delays ( $\pm 5\%$ or $\pm 2\text{nS}$ )				Total Delay ( $\pm 5\%$ or $\pm 2\text{nS}$ )
EP9604-32(-RC)	12*	17	22	27	32	EP9604-400(-RC)	80	160	240	320	400
EP9604-36(-RC)	12*	18	24	30	36	EP9604-420(-RC)	84	168	252	336	420
EP9604-40(-RC)	12*	19	26	33	40	EP9604-440(-RC)	88	176	264	352	440
EP9604-44(-RC)	12*	20	28	36	44	EP9604-450(-RC)	90	180	270	360	450
EP9604-48(-RC)	12*	21	30	39	48	EP9604-500(-RC)	100	200	300	400	500
EP9604-52(-RC)	12*	22	32	42	52	EP9604-550(-RC)	110	220	330	440	550
EP9604-60(-RC)	12*	24	36	48	60	EP9604-600(-RC)	120	240	360	480	600
EP9604-75(-RC)	15	30	45	60	75	EP9604-650(-RC)	130	260	390	520	650
EP9604-100(-RC)	20	40	60	80	100	EP9604-700(-RC)	140	280	420	560	700
EP9604-125(-RC)	25	50	75	100	125	EP9604-750(-RC)	150	300	450	600	750
EP9604-150(-RC)	30	60	90	120	150	EP9604-800(-RC)	160	320	480	640	800
EP9604-175(-RC)	35	70	105	140	175	EP9604-850(-RC)	170	340	510	680	850
EP9604-200(-RC)	40	80	120	160	200	EP9604-900(-RC)	180	360	540	720	900
EP9604-250(-RC)	50	100	150	200	250	EP9604-950(-RC)	190	380	570	760	950
EP9604-300(-RC)	60	120	180	240	300	EP9604-1000(-RC)	200	400	600	800	1000
EP9604-350(-RC)	70	140	210	280	350						

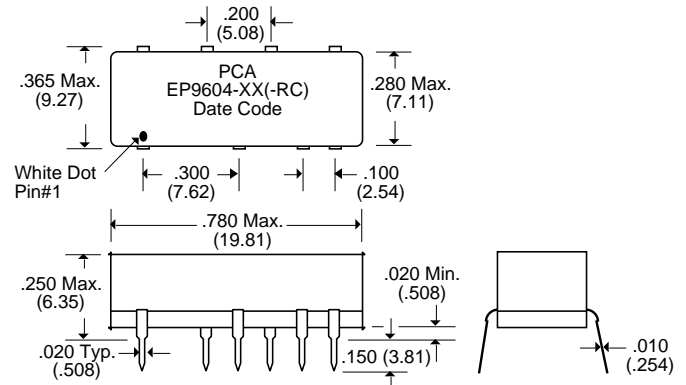
† Whichever is greater. \* Inherent Delay • Delay times referenced from input to leading edges at 25°C, 5.0V.

DC Electrical Characteristics		Test Conditions	Min.	Max.	Unit
Parameter					
V <sub>IH</sub>	High Level Input Voltage	V <sub>CC</sub> = 4.5 to 5.5	2.0		Volt
V <sub>IL</sub>	Low Level Input Voltage	V <sub>CC</sub> = 4.5 to 5.5		0.8	Volt
V <sub>OH</sub>	High Level Output Voltage	V <sub>CC</sub> = 4.5V, I <sub>O</sub> = -4.0mA @ V <sub>IH</sub> or V <sub>IL</sub>	4.0		Volt
V <sub>OL</sub>	Low Level Output Voltage	V <sub>CC</sub> = 4.5V, I <sub>O</sub> = 4.0mA @ V <sub>IH</sub> or V <sub>IL</sub>		0.3	Volt
I <sub>L</sub>	Input Leakage Current	V <sub>CC</sub> = 5.5V @ V <sub>IH</sub> or V <sub>IL</sub>		±1.0	uA
I <sub>CC1</sub>	Supply Current	V <sub>CC</sub> = 5.5V, V <sub>IN</sub> = 0		15	mA
T <sub>RO</sub>	Output Rise Time	550 nS (.75 - 2.4 Volts) >550 nS		4 5	nS
N <sub>H</sub>	High Fanout	V <sub>CC</sub> = 5.5V, V <sub>OH</sub> = 4.0V	10		LSTTL Load

### Schematic



### Package



Recommended Operating Conditions		Min.	Max.	Unit
V <sub>CC</sub>	DC Supply Voltage	4.5	5.5	Volt
V <sub>I</sub>	DC Input Voltage Range	0	V <sub>CC</sub>	Volt
V <sub>O</sub>	DC Output Voltage Range	0	V <sub>CC</sub>	Volt
I <sub>O</sub>	DC Output Source/Sink Current		25	mA
PW*	Pulse Width % of Total Delay	40		%
D*	Duty Cycle		40	%
T <sub>A</sub>	Operating Free Air Temperature	-40	+85	°C

\*These two values are inter-dependent.

Input Pulse Test Conditions @ 25° C			Unit
E <sub>IN</sub>	Pulse Input Voltage	3.2	Volts
PW	Pulse Width % of Total Delay	150	%
T <sub>RI</sub>	Pulse Rise Time (0.75 - 2.4 Volts)	2.0	nS
PRR	Pulse Repetition Rate @ T <sub>d</sub> 500 nS	1.0	MHz
	Pulse Repetition Rate @ T <sub>d</sub> > 500 nS	100	KHz
V <sub>CC</sub>	Supply Voltage	5.0	Volts

Notes :	EP9604-XX	EP9604-XX-RC
1. Assembly Process (Leadframe) (Solder Composition)	SnPb	Sn
	(Assembly Solder)	SnPb (RoHS exemption 7a)
2. Peak Solder Rating (per JEDEC22-B102D)	260°C	260°C
3. Moisture Sensitive Levels (MSL) (per JEDEC22-B102D)	3 (168 hours, 30°C/60%RH)	4 (72 hours, 30°C/60%RH)
4. Weight	TBD grams	TBD grams
5. Packaging Information (Tube)	27 pieces/tube	27 pieces/tube

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