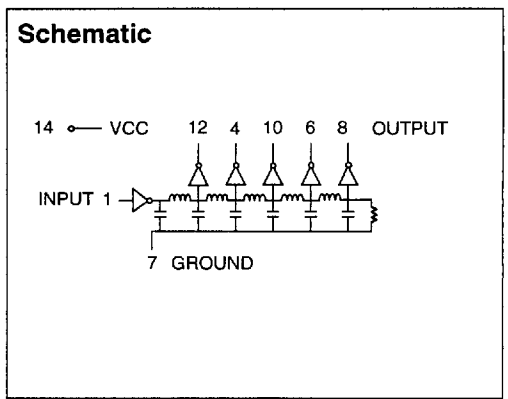


# 5 Tap High Speed CMOS (HCT) Compatible Active Delay Lines

| Delays are $\pm 5\%$ or $\pm 2$ nSt |     |       |     |     | DIP Part Number | SMD Part Number | Delays are $\pm 5\%$ or $\pm 2$ nSt |     |       |     |      | DIP Part Number | SMD Part Number |
|-------------------------------------|-----|-------|-----|-----|-----------------|-----------------|-------------------------------------|-----|-------|-----|------|-----------------|-----------------|
| Tap                                 |     | Total |     |     |                 |                 | Tap                                 |     | Total |     |      |                 |                 |
| 12*                                 | 17  | 22    | 27  | 32  | EP9604-32       | EP9604G-32      | 80                                  | 160 | 240   | 320 | 400  | EP9604-400      | EP9604G-400     |
| 12*                                 | 18  | 24    | 30  | 36  | EP9604-36       | EP9604G-36      | 84                                  | 168 | 252   | 336 | 420  | EP9604-420      | EP9604G-420     |
| 12*                                 | 19  | 26    | 33  | 40  | EP9604-40       | EP9604G-40      | 88                                  | 176 | 264   | 352 | 440  | EP9604-440      | EP9604G-440     |
| 12*                                 | 20  | 28    | 36  | 44  | EP9604-44       | EP9604G-44      | 90                                  | 180 | 270   | 360 | 450  | EP9604-450      | EP9604G-450     |
| 12*                                 | 21  | 30    | 39  | 48  | EP9604-48       | EP9604G-48      | 100                                 | 200 | 300   | 400 | 500  | EP9604-500      | EP9604G-500     |
| 12*                                 | 22  | 32    | 42  | 52  | EP9604-52       | EP9604G-52      | 110                                 | 220 | 330   | 440 | 550  | EP9604-550      | EP9604G-550     |
| 12*                                 | 24  | 36    | 48  | 60  | EP9604-60       | EP9604G-60      | 120                                 | 240 | 360   | 480 | 600  | EP9604-600      | EP9604G-600     |
| 15                                  | 30  | 45    | 60  | 75  | EP9604-75       | EP9604G-75      | 130                                 | 260 | 390   | 520 | 650  | EP9604-650      | EP9604G-650     |
| 20                                  | 40  | 60    | 80  | 100 | EP9604-100      | EP9604G-100     | 140                                 | 280 | 420   | 560 | 700  | EP9604-700      | EP9604G-700     |
| 25                                  | 50  | 75    | 100 | 125 | EP9604-125      | EP9604G-125     | 150                                 | 300 | 450   | 600 | 750  | EP9604-750      | EP9604G-750     |
| 30                                  | 60  | 90    | 120 | 150 | EP9604-150      | EP9604G-150     | 160                                 | 320 | 480   | 640 | 800  | EP9604-800      | EP9604G-800     |
| 35                                  | 70  | 105   | 140 | 175 | EP9604-175      | EP9604G-175     | 170                                 | 340 | 510   | 680 | 850  | EP9604-850      | EP9604G-850     |
| 40                                  | 80  | 120   | 160 | 200 | EP9604-200      | EP9604G-200     | 180                                 | 360 | 540   | 720 | 900  | EP9604-900      | EP9604G-900     |
| 50                                  | 100 | 150   | 200 | 250 | EP9604-250      | EP9604G-250     | 190                                 | 380 | 570   | 760 | 950  | EP9604-950      | EP9604G-950     |
| 60                                  | 120 | 180   | 240 | 300 | EP9604-300      | EP9604G-300     | 200                                 | 400 | 600   | 800 | 1000 | EP9604-1000     | EP9604G-1000    |
| 70                                  | 140 | 210   | 280 | 350 | EP9604-350      | EP9604G-350     |                                     |     |       |     |      |                 |                 |

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

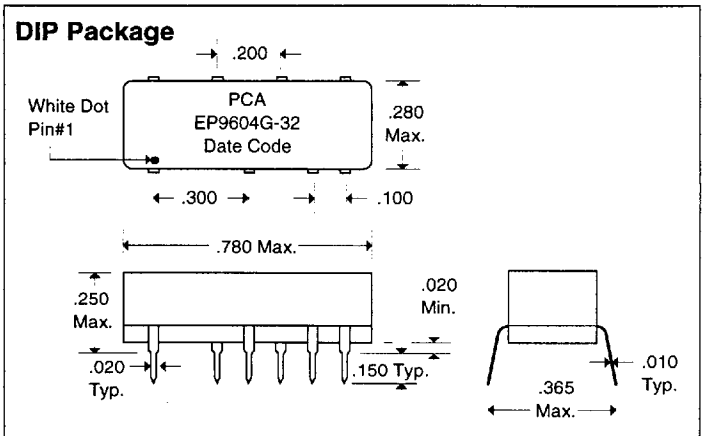
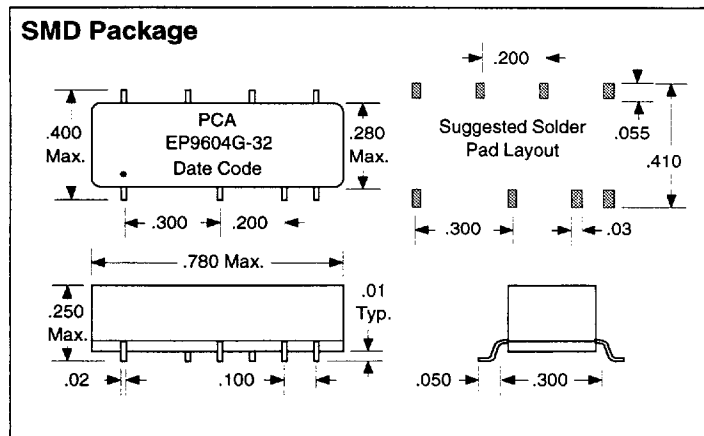
| DC Electrical Characteristics |                           |  | Min | Max  | Unit       |
|-------------------------------|---------------------------|--|-----|------|------------|
| Parameter                     | Test Conditions           |  |     |      |            |
| V <sub>IH</sub>               | 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 | µA         |
| I <sub>CC</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)   |     | 4    | nS         |
|                               |                           | > 550 nS   |     | 5    | nS         |
| N <sub>H</sub>                | High Fanout               | V <sub>CC</sub> = 5.5V, V <sub>OH</sub> = 4.0V                                       | 10  |      | LSTTL Load |



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

| 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 |  | 0   | 70              | °C   |

\*These two values are inter-dependent.



DSD9604/G Rev. A 2/5/96

6852109 0000583 838

QAF-CS01a Rev. B 8/25/94

Unless Otherwise Noted Dimensions in Inches

Tolerances:

Fractional =  $\pm 1/32$

24 .XX =  $\pm .030$  .XXX =  $\pm .010$



16799 SCHOENBORN ST.  
NORTH HILLS, CA 91343  
TEL: (818) 892-0761  
FAX: (818) 894-5791