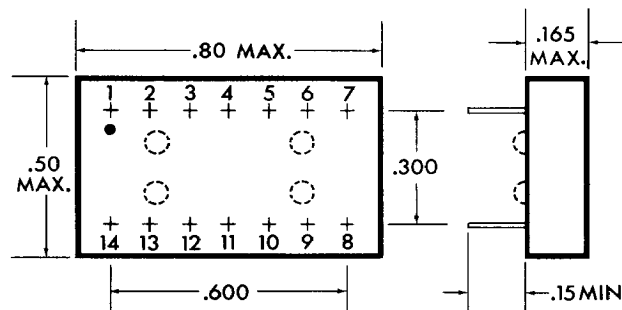


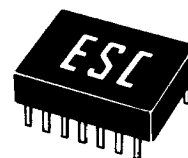


# LOW PROFILE DIGITAL DELAY LINES LOW POWER SCHOTTKY 14 PIN PACKAGE 5 TAPS • SINGLE • DUAL • TRIPLE FOR MILITARY APPLICATIONS

## SERIES 9LT, 9LG, 9LD AND 9LP



White Dot locates Pin 1



ONLY ACTIVE PINS ARE SUPPLIED

Available with .015 standoffs. Add suffix S to part number when ordering.  
The height of the 9LP series is .200, with standoffs it is .215 max.

Intermediate delay values  
available upon request.

| SERIES 9LT (5 TAP)    |               |                    |
|-----------------------|---------------|--------------------|
| Model No.<br>(Fig. 1) | Delay<br>(ns) | Delay/<br>Tap (ns) |
| 9LT25                 | 25            | 5                  |
| 9LT30                 | 30            | 6                  |
| 9LT35                 | 35            | 7                  |
| 9LT40                 | 40            | 8                  |
| 9LT45                 | 45            | 9                  |
| 9LT50                 | 50            | 10                 |
| 9LT60                 | 60            | 12                 |
| 9LT75                 | 75            | 15                 |
| 9LT100                | 100           | 20                 |
| 9LT125                | 125           | 25                 |
| 9LT150                | 150           | 30                 |
| 9LT200                | 200           | 40                 |
| 9LT250                | 250           | 50                 |
| 9LT300                | 300           | 60                 |
| 9LT400                | 400           | 80                 |
| 9LT500                | 500           | 100                |

| Delay/<br>line(ns) | MODEL NUMBERS          |                         |                           |
|--------------------|------------------------|-------------------------|---------------------------|
|                    | Series 9LG             | Series 9LD              | Series 9LP                |
|                    | One output<br>(Fig. 2) | Dual output<br>(Fig. 3) | Triple output<br>(Fig. 4) |
| 10                 | 9LG10                  | 9LD10                   | 9LP10                     |
| 15                 | 9LG15                  | 9LD15                   | 9LP15                     |
| 20                 | 9LG20                  | 9LD20 ✓                 | 9LP20                     |
| 25                 | 9LG25                  | 9LD25                   | 9LP25                     |
| 30                 | 9LG30                  | 9LD30                   | 9LP30                     |
| 35                 | 9LG35                  | 9LD35                   | 9LP35                     |
| 40                 | 9LG40                  | 9LD40                   | 9LP40                     |
| 45                 | 9LG45                  | 9LD45                   | 9LP45                     |
| 50                 | 9LG50                  | 9LD50                   | 9LP50                     |
| 60                 | 9LG60                  | 9LD60                   | —                         |
| 75                 | 9LG75                  | 9LD75                   | —                         |
| 100                | 9LG100                 | 9LD100                  | —                         |
| 125                | 9LG125                 | —                       | —                         |
| 150                | 9LG150                 | —                       | —                         |
| 200                | 9LG200                 | —                       | —                         |
| 250                | 9LG250                 | —                       | —                         |
| 300                | 9LG300                 | —                       | —                         |
| 400                | 9LG400                 | —                       | —                         |
| 500                | 9LG500                 | —                       | —                         |

| DC PARAMETERS |                                              | LIMITS                                                                   |                  |
|---------------|----------------------------------------------|--------------------------------------------------------------------------|------------------|
|               |                                              | Min.                                                                     | Max.             |
| $V_{oh}$      | $V_{cc} = \min$<br>$I_{oh} = 1.0 \text{ mA}$ | 2.5V                                                                     | —                |
| $V_{ol}$      | $V_{cc} = \min$<br>$I_{ol} = 20 \text{ mA}$  | —                                                                        | 0.5V             |
| $I_{ih}$      | $V_{cc} = \max$<br>$V_{ih} = 2.7V$           | —                                                                        | 20 $\mu\text{A}$ |
| $I_{il}$      | $V_{cc} = \max$<br>$V_{il} = 0.5V$           | -0.40 max                                                                | —                |
| $I_i$         | $V_{cc} = \max$<br>$V_i = 5.5V$              | —                                                                        | 0.10 mA          |
| $V_i$         | $V_{cc} = \min$<br>$I_{in} = 18 \text{ mdc}$ | -1.5vdc                                                                  | —                |
| $I_{cc}$      | $V_{cc} = \max$<br>outputs low               | Series 9LT 25mA<br>Series 9LG 20mA<br>Series 9LD 36mA<br>Series 9LP 43mA |                  |

For variations in delay from above listing, modify part number by changing delay.  
Example: 175ns, 9LG series becomes 9LG175.

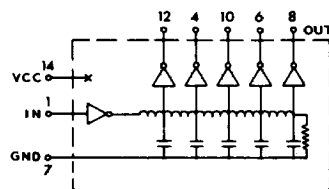


FIG. 1

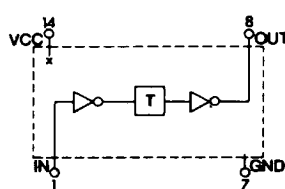


FIG. 2

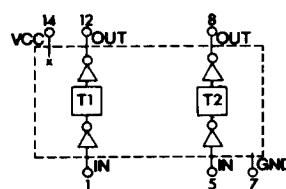


FIG. 3

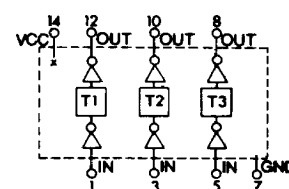


FIG. 4

### SPECIFICATIONS:

- Supply voltage ( $V_{cc}$ ): 5.0VDC  $\pm 5\%$
- Delay tolerances:  $\pm 2\text{ns}$  or  $\pm 5\%$  wig
- Rise Time: 8ns max
- Minimum Pulse Width: 40% of Total delay
- Maximum Duty Cycle: 50%
- Operating temp. range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$
- Temp. coeff. of delay:  $1.0\text{ns} + 1000\text{ppm}/^\circ\text{C}$
- Terminals: Electro tin plated alloy 42  
0.020w x .010th.

### TEST CONDITIONS:

- Temperature:  $25^\circ \pm 5^\circ\text{C}$ ;  $V_{cc}=5.0\text{VDC}$
- Input pulse width: 1.2 times the total delay time
- Pulse spacing: 5 times the total delay time
- Input rise time: 2ns; input pulse amplitude 3.0VDC
- All outputs loaded with 15pF
- Time delays measured at the 1.5 volts level on the leading edges
- Rise time measured from .75 to 2.4V

These devices are supplied with ceramic packaged IC's that have been screened to MIL-STD-883.

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