

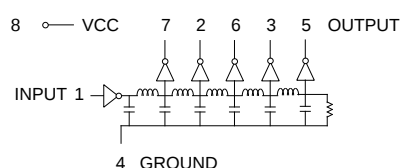
## 8 Pin Mini DIP and Mini DIL 5 Tap TTL Compatible Active Delay Lines

| Delays are ±5% or ±2 nS†<br>Tap |     | DIP Part<br>Number | DIL Part<br>Number | Delays are ±5% or ±2 nS†<br>Tap |     | DIP Part<br>Number | DIL Part<br>Number |
|---------------------------------|-----|--------------------|--------------------|---------------------------------|-----|--------------------|--------------------|
| 5, 10, 15, 20                   | 25  | EP9458-25          | EP9458-25W         | 30, 60, 90, 120                 | 150 | EP9458-150         | EP9458-150W        |
| 6, 12, 18, 24                   | 30  | EP9458-30          | EP9458-30W         | 35, 70, 105, 140                | 175 | EP9458-175         | EP9458-175W        |
| 7, 14, 21, 28                   | 35  | EP9458-35          | EP9458-35W         | 40, 80, 120, 160                | 200 | EP9458-200         | EP9458-200W        |
| 8, 16, 24, 32                   | 40  | EP9458-40          | EP9458-40W         | 45, 90, 135, 180                | 225 | EP9458-225         | EP9458-225W        |
| 9, 18, 27, 36                   | 45  | EP9458-45          | EP9458-45W         | 50, 100, 150, 200               | 250 | EP9458-250         | EP9458-250W        |
| 10, 20, 30, 40                  | 50  | EP9458-50          | EP9458-50W         | 60, 120, 180, 240               | 300 | EP9458-300         | EP9458-300W        |
| 12, 24, 36, 48                  | 60  | EP9458-60          | EP9458-60W         | 70, 140, 210, 280               | 350 | EP9458-350         | EP9458-350W        |
| 15, 30, 45, 60                  | 75  | EP9458-75          | EP945875W          | 80, 160, 240, 320               | 400 | EP9458-400         | EP9458-400W        |
| 20, 40, 60, 80                  | 100 | EP9458-100         | EP9458-100W        | 90, 180, 270, 360               | 450 | EP9458-450         | EP9458-450W        |
| 25, 50, 75, 100                 | 125 | EP9458-125         | EP9458-125W        | 100, 200, 300, 400              | 500 | EP9458-500         | EP9458-500W        |

†Whichever is greater. Delay times referenced from input to leading edges at 25°C, 5.0V, with no load.

| DC Electrical Characteristics |                              |                                                                     | Min | Max         | Unit |
|-------------------------------|------------------------------|---------------------------------------------------------------------|-----|-------------|------|
| Parameter                     | Test Conditions              |                                                                     |     |             |      |
| V <sub>OH</sub>               | High-Level Output Voltage    | V <sub>CC</sub> = min. V <sub>IL</sub> = max. I <sub>OH</sub> = max | 2.7 |             | V    |
| V <sub>OL</sub>               | Low-Level Output Voltage     | V <sub>CC</sub> = min. V <sub>IH</sub> = min. I <sub>OL</sub> = max |     | 0.5         | V    |
| V <sub>IK</sub>               | Input Clamp Voltage          | V <sub>CC</sub> = min. I <sub>I</sub> = II <sub>K</sub>             |     | -1.2        | V    |
| I <sub>IH</sub>               | High-Level Input Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 2.7V                       |     | 50          | μA   |
|                               |                              | V <sub>CC</sub> = max. V <sub>IN</sub> = 5.25V                      |     | 1.0         | mA   |
| I <sub>IL</sub>               | Low-Level Input Current      | V <sub>CC</sub> = max. V <sub>IN</sub> = 0.5V                       |     | -2          | mA   |
| I <sub>OS</sub>               | Short Circuit Output Current | V <sub>CC</sub> = max. V <sub>OUT</sub> = 0.                        | -40 | -100        | mA   |
|                               |                              | (One output at a time)                                              |     |             |      |
| I <sub>CCH</sub>              | High-Level Supply Current    | V <sub>CC</sub> = max. V <sub>IN</sub> = OPEN                       |     | 75          | mA   |
| I <sub>CCL</sub>              | Low-Level Supply Current     | V <sub>CC</sub> = max. V <sub>IN</sub> = 0                          |     | 75          | mA   |
| T <sub>RO</sub>               | Output Rise Time             | Td ≤ 500 nS (0.75 to 2.4 Volts)                                     |     | 4           | nS   |
| N <sub>H</sub>                | Fanout High-Level Output     | V <sub>CC</sub> = max. V <sub>OH</sub> = 2.7V                       |     | 20 TTL LOAD |      |
| N <sub>L</sub>                | Fanout Low-Level Output      | V <sub>CC</sub> = max. V <sub>OL</sub> = 0.5V                       |     | 10 TTL LOAD |      |

### Schematic

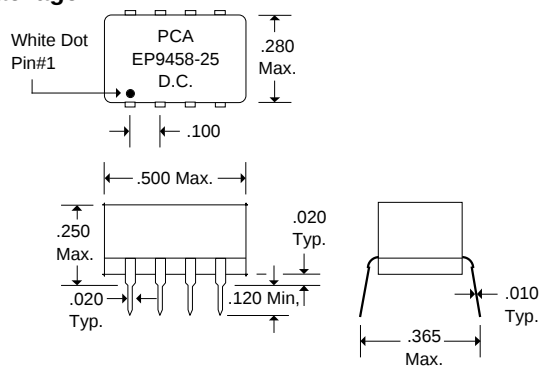


| Recommended Operating Conditions |                                | Min  | Max  | Unit |
|----------------------------------|--------------------------------|------|------|------|
| V <sub>CC</sub>                  | Supply Voltage                 | 4.75 | 5.25 | V    |
| V <sub>IH</sub>                  | High-Level Input Voltage       | 2.0  |      | V    |
| V <sub>IL</sub>                  | Low-Level Input Voltage        |      | 0.8  | V    |
| I <sub>IK</sub>                  | Input Clamp Current            |      | -18  | mA   |
| I <sub>OH</sub>                  | High-Level Output Current      |      | -1.0 | mA   |
| I <sub>OL</sub>                  | Low-Level Output Current       |      | 20   | mA   |
| PW*                              | Pulse Width of Total Delay     | 40   |      | %    |
| d*                               | Duty Cycle                     |      | 40   | %    |
| T <sub>A</sub>                   | Operating Free-Air Temperature | 0    | +70  | °C   |

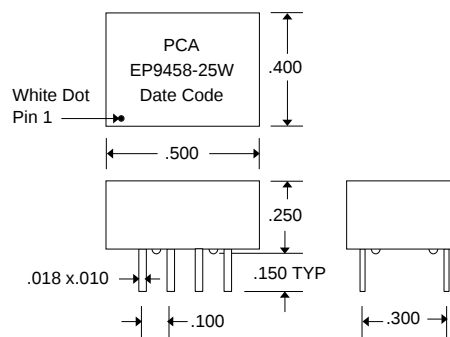
| Input Pulse Test Conditions @ 25° C |                                     |     | Unit  |
|-------------------------------------|-------------------------------------|-----|-------|
| E <sub>IN</sub>                     | Pulse Input Voltage                 | 3.2 | Volts |
| P <sub>W</sub>                      | Pulse Width % of Total Delay        | 110 | %     |
| T <sub>RI</sub>                     | Pulse Rise Time (0.75 - 2.4 Volts)  | 2.0 | nS    |
| P <sub>RR</sub>                     | Pulse Repetition Rate @ Td ≤ 200 nS | 1.0 | MHz   |
|                                     | Pulse Repetition Rate @ Td > 200 nS | 100 | KHz   |
| V <sub>CC</sub>                     | Supply Voltage                      | 5.0 | Volts |

*\*These two values are inter-dependent.*

### DIP Package



### DIL Package



DSD9458 Rev. A 2/5/96

OAF-CS01 Rev. B 8/25/94

Unless Otherwise Noted Dimensions in Inches

Otherwise Noted Dimensions in  
Tolerances:  
Fractional =  $\pm 1/32$   
.XX =  $\pm .030$  .XXX =  $\pm .010$



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