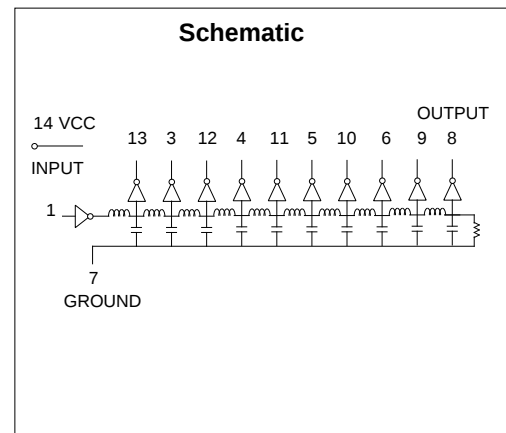


# SMD 14 Pin 10 Tap TTL Compatible Active Delay Modules

| Tap Delays<br>±5% or ±2 nS† | Total Delays<br>±5% or ±2 nS† | Gull-Wing<br>Part<br>Number | J-Lead<br>Part<br>Number | Tap Delays<br>±5% or ±2 nS† | Total Delays<br>±5% or ±2 nS† | Gull-Wing<br>Part<br>Number | J-Lead<br>Part<br>Number |
|-----------------------------|-------------------------------|-----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------------------|--------------------------|
| 5                           | 50                            | EPA245-50                   | EPA247-50                | 44                          | 440                           | EPA245-440                  | EPA247-440               |
| 6                           | 60                            | EPA245-60                   | EPA247-60                | 45                          | 450                           | EPA245-450                  | EPA247-450               |
| 7.5                         | 75                            | EPA245-75                   | EPA247-75                | 47                          | 470                           | EPA245-470                  | EPA247-470               |
| 10                          | 100                           | EPA245-100                  | EPA247-100               | 50                          | 500                           | EPA245-500                  | EPA247-500               |
| 12.5                        | 125                           | EPA245-125                  | EPA247-125               | 55                          | 550                           | EPA245-550                  | EPA247-550               |
| 15                          | 150                           | EPA245-150                  | EPA247-150               | 60                          | 600                           | EPA245-600                  | EPA247-600               |
| 17.5                        | 175                           | EPA245-175                  | EPA247-175               | 65                          | 650                           | EPA245-650                  | EPA247-650               |
| 20                          | 200                           | EPA245-200                  | EPA247-200               | 70                          | 700                           | EPA245-700                  | EPA247-700               |
| 22.5                        | 225                           | EPA245-225                  | EPA247-225               | 75                          | 750                           | EPA245-750                  | EPA247-750               |
| 25                          | 250                           | EPA245-250                  | EPA247-250               | 80                          | 800                           | EPA245-800                  | EPA247-800               |
| 30                          | 300                           | EPA245-300                  | EPA247-300               | 85                          | 850                           | EPA245-850                  | EPA247-850               |
| 35                          | 350                           | EPA245-350                  | EPA247-350               | 90                          | 900                           | EPA245-900                  | EPA247-900               |
| 40                          | 400                           | EPA245-400                  | EPA247-400               | 95                          | 950                           | EPA245-950                  | EPA247-950               |
| 42                          | 420                           | EPA245-420                  | EPA247-420               | 100                         | 1000                          | EPA245-1000                 | EPA247-1000              |

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

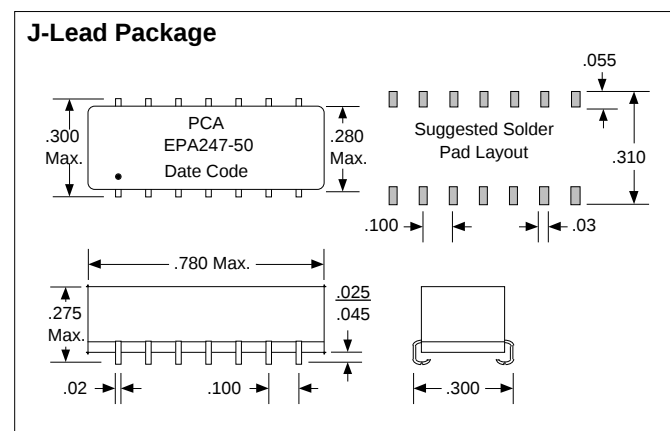
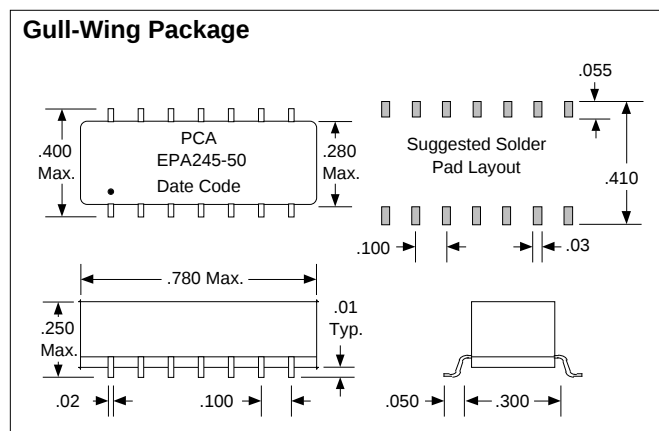
| DC Electrical Characteristics |                              |                                                                     |             |      |
|-------------------------------|------------------------------|---------------------------------------------------------------------|-------------|------|
| Parameter                     | Test Conditions              | Min                                                                 | Max         | Unit |
| 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> = I <sub>IK</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   |
| I <sub>IL</sub>               | Low-Level Input Current      | V <sub>CC</sub> = max. V <sub>IN</sub> = 5.25V                      | 1.0         | mA   |
| I <sub>OS</sub>               | Short Circuit Output Current | V <sub>CC</sub> = max. V <sub>IN</sub> = 0.5V                       | -2          | mA   |
| I <sub>CCH</sub>              | High-Level Supply Current    | V <sub>CC</sub> = max. V <sub>IN</sub> = 0.5V                       | -40         | mA   |
| I <sub>CCL</sub>              | Low-Level Supply Current     | V <sub>CC</sub> = max. V <sub>OUT</sub> = 0.                        | -100        | mA   |
| T <sub>RO</sub>               | Output Rise Time             | (One output at a time)                                              |             |      |
| N <sub>H</sub>                | Fanout High-Level Output     | V <sub>CC</sub> = max. V <sub>IN</sub> = OPEN                       | 150         | mA   |
| N <sub>L</sub>                | Fanout Low-Level Output      | V <sub>CC</sub> = max. V <sub>IN</sub> = 0                          | 150         | mA   |
|                               |                              | T <sub>d</sub> ≤ 500 nS (0.75 to 2.4 Volts)                         | 4           | nS   |
|                               |                              | T <sub>d</sub> > 500 nS                                             | 5           | nS   |
|                               |                              | V <sub>CC</sub> = max. V <sub>OH</sub> = 2.7V                       | 20 TTL LOAD |      |
|                               |                              | V <sub>CC</sub> = max. V <sub>OL</sub> = 0.5V                       | 10 TTL LOAD |      |



| 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 @ T <sub>d</sub> ≤ 200 nS | 1.0 | MHz   |
|                                     | Pulse Repetition Rate @ T <sub>d</sub> > 200 nS | 100 | KHz   |
| V <sub>CC</sub>                     | Supply Voltage                                  | 5.0 | Volts |

| 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   |
| P <sub>W</sub> *                 | 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.



DSA245/7 Rev. A 2/5/96

Unless Otherwise Noted Dimensions in Inches

Tolerances:  
Fractional = ± 1/32  
.XX = ± .030 .XXX = ± .010



QAF-CS01 Rev. B 8/25/94

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