

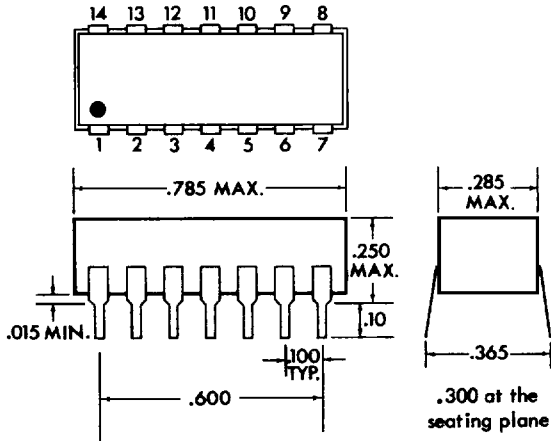


# FAST TTL LOGIC DELAY LINES

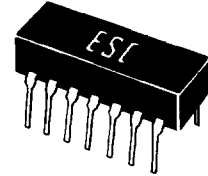
## 14 PIN PACKAGE

### MACHINE INSERTABLE DIP 5 TAPS • SINGLE • DUAL • TRIPLE

**SERIES 14FTD, 14FGD, 14FDD AND 14FPD**



White Dot locates Pin 1



ONLY ACTIVE PINS ARE SUPPLIED

Intermediate delay values available upon request.

SERIES 14FTD (5 TAP)		
Model No. (Fig. 1)	Time Delay (nsec)	Delay/Tap (nsec)
14FTD25	25	5
14FTD30	30	6
14FTD35	35	7
14FTD40	40	8
14FTD45	45	9
14FTD50	50	10
14FTD75	75	15
14FTD100	100	20
14FTD150	150	30
14FTD200	200	40
14FTD250	250	50
14FTD300	300	60
14FTD500	500	100

Delay/Line (ns)	MODEL NUMBERS		
	Series 14FGD	Series 14FDD	Series 14FPD
	One output (Fig. 2)	Dual output (Fig. 3)	Triple output (Fig. 4)
25	14FGD25	14FDD25	14FPD25
30	14FGD30	14FDD30	14FPD30
35	14FGD35	14FDD35	14FPD35
40	14FGD40	14FDD40	14FPD40
45	14FGD45	14FDD45	14FPD45
50	14FGD50	14FDD50	14FPD50
75	14FGD75	14FDD75	14FPD75
100	14FGD100	14FDD100	14FPD100
150	14FGD150	—	—
200	14FGD200	—	—
250	14FGD250	—	—
300	14FGD300	—	—
500	14FGD500	—	—

DC PARAMETERS		LIMITS	
		Min.	Max.
$V_{oh}$	$V_{cc} = \min$ $I_{oh} = 1.0 \text{ mA}$	2.5V	—
$V_{ol}$	$V_{cc} = \min$ $I_{ol} = 20 \text{ mA}$	—	0.5V
$I_{th}$	$V_{cc} = \max$ $V_{th} = 2.7V$	—	20 $\mu\text{A}$
$I_{il}$	$V_{cc} = \max$ $V_{il} = 0.5V$	-1.6mA	—
$I_i$	$V_{cc} = \max$ $V_i = 5.5V$	—	100 $\mu\text{A}$
$V_i$	$V_{cc} = \min$ $I_{in} = 18 \text{ mADC}$	-1.2vdc	—
$I_{cc}$	$V_{cc} = \max$ outputs low	Series 14FTD 50mA Series 14FGD 43mA Series 14FDD 80mA Series 14FPD 110mA	—

For variations in delay from above listing, modify part number by changing delay.  
Example: 400ns, 14FTD series becomes 14FTD400.

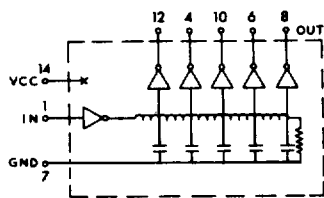


FIG. 1

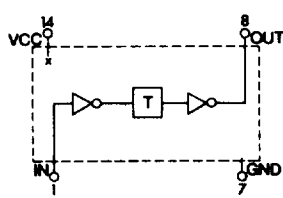


FIG. 2

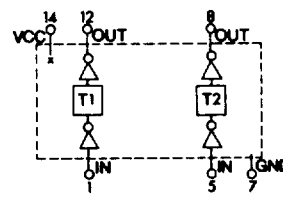


FIG. 3

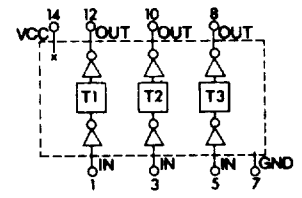


FIG. 4

**SPECIFICATIONS:**

- Supply voltage: 5.0VDC  $\pm$  5%
- Delay tolerances:  $\pm$  2ns or  $\pm$  5% wig
- Rise Time: 3ns max
- Minimum Pulse Width: 40% of Total Delay
- Maximum Duty Cycle: 50%
- Operating temp. range: 0°C to +70°C
- Temp. coeff. of delay: 1.0ns + 500ppm/°C
- Terminals: Electro tin plated alloy 42 .020w x .010th

**TEST CONDITIONS:**

- $V_{cc}$ =5.0VDC, Temp. 25°  $\pm$  5°C
- Time delay measured at the 1.5V level
- Rise time measured from .75V to 2.4V
- All outputs loaded with 15pf
- Input Test Pulse:
  - Pulse voltage: 3.0V
  - Pulse rise time: 2ns
  - Pulse width: 1.2 x max Td
  - Pulse spacing: 5 x max Td