

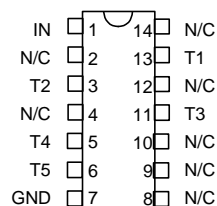
5-TAP DIP DELAY LINE

$T_D/T_R = 3$
(SERIES 1517)

**data
delay
devices, inc.** 

FEATURES

- 5 taps of equal delay increment
- Delays as large as 300ns available
- Low DC resistance
- Standard 14-pin DIP package
- Epoxy encapsulated
- Meets or exceeds MIL-D-23859C

PACKAGES

1517-xxz

xx = Delay (T_D)

z = Impedance Code

FUNCTIONAL DESCRIPTION

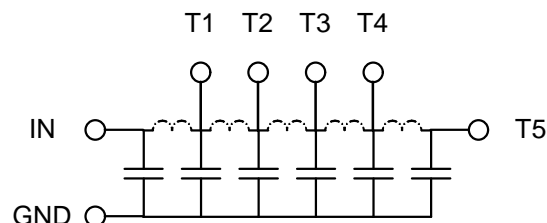
The 1517-series device is a fixed, single-input, five-output, passive delay line. The signal input (IN) is reproduced at the outputs (T1-T5) in equal increments. The delay from IN to T5 (T_D) is given by the device dash number. The characteristic impedance of the line is given by the letter code that follows the dash number (See Table). The rise time (T_R) of the line is 33% of T_D , and the 3dB bandwidth is given by $1.05 / T_D$.

PIN DESCRIPTIONS

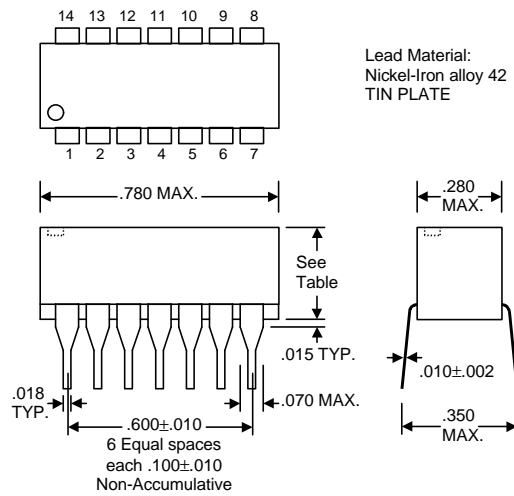
IN Signal Input
 T1-T5 Tap Outputs
 GND Ground

SERIES SPECIFICATIONS

- **Dielectric breakdown:** 50 Vdc
- **Distortion @ output:** 10% max.
- **Operating temperature:** -55°C to +125°C
- **Storage temperature:** -55°C to +125°C
- **Temperature coefficient:** 100 PPM/°C

FUNCTIONAL DIAGRAM**DASH NUMBER SPECIFICATIONS**

Part Number	Delay (ns)	Imped (Ω)	RDC (Ω)	Part Number	Delay (ns)	Imped (Ω)	RDC (Ω)	Part Number	Delay (ns)	Imped (Ω)	RDC (Ω)
1517-10A	10.0 ± 1.0	50	0.6	1517-80C	80.0 ± 4.0	200	3.5	1517-20F	20.0 ± 1.0	400	4.5
1517-15A	15.0 ± 1.0	50	0.6	1517-90C	90.0 ± 4.5	200	5.0	1517-40F	40.0 ± 2.0	400	5.0
1517-20A	20.0 ± 1.0	50	0.7	1517-120C	120.0 ± 6.0	200	5.0	1517-60F	60.0 ± 3.0	400	5.0
1517-30A	30.0 ± 1.5	50	0.7	1517-150C	150.0 ± 7.5	200	8.0	1517-80F	80.0 ± 4.0	400	8.0
1517-40A	40.0 ± 2.0	50	0.9	1517-25D	25.0 ± 1.3	250	2.5	1517-100F	100.0 ± 5.0	400	9.0
1517-5B	5.0 ± 1.0	100	0.5	1517-37D	37.0 ± 1.9	250	3.0	1517-120F	120.0 ± 6.0	400	10.0
1517-10B	10.0 ± 1.0	100	0.7	1517-50D	50.0 ± 2.5	250	3.5	1517-160F	160.0 ± 8.0	400	13.0
1517-15B	15.0 ± 1.0	100	0.7	1517-60D	60.0 ± 3.0	250	4.0	1517-180F	180.0 ± 9.0	400	14.0
1517-20B	20.0 ± 1.0	100	0.9	1517-75D	75.0 ± 3.8	250	4.0	1517-240F	240.0 ± 12.0	400	19.0
1517-25B	25.0 ± 1.3	100	1.0	1517-100D	100.0 ± 5.0	250	5.0	1517-300F	300.0 ± 15.0	400	23.0
1517-30B	30.0 ± 1.5	100	1.5	1517-150D	150.0 ± 7.5	250	8.5	1517-25G	25.0 ± 1.3	500	3.0
1517-40B	40.0 ± 2.0	100	1.8	1517-15E	15.0 ± 1.0	300	2.5	1517-50G	50.0 ± 2.5	500	5.0
1517-50B	50.0 ± 2.5	100	2.0	1517-30E	30.0 ± 1.5	300	3.0	1517-75G	75.0 ± 3.8	500	8.0
1517-60B	60.0 ± 3.0	100	2.0	1517-50E	50.0 ± 2.5	300	4.0	1517-100G	100.0 ± 5.0	500	15.0
1517-75B	75.0 ± 3.8	100	2.5	1517-60E	60.0 ± 3.0	300	4.0	1517-125G	125.0 ± 6.3	500	9.0
1517-10C	10.0 ± 1.0	200	1.5	1517-75E	75.0 ± 3.8	300	4.5	1517-150G	150.0 ± 7.5	500	13.0
1517-20C	20.0 ± 1.0	200	2.0	1517-90E	90.0 ± 4.5	300	5.5	1517-200G	200.0 ± 10.0	500	21.0
1517-30C	30.0 ± 1.5	200	2.5	1517-120E	120.0 ± 6.0	300	8.0	1517-225G	225.0 ± 11.3	500	23.0
1517-40C	40.0 ± 2.0	200	3.0	1517-130E	130.0 ± 6.5	300	9.0	1517-300G	300.0 ± 15.0	500	29.0
1517-50C	50.0 ± 2.5	200	3.0	1517-180E	180.0 ± 9.0	300	11.0				
1517-60C	60.0 ± 3.0	200	3.5	1517-220E	220.0 ± 11.0	300	13.0				



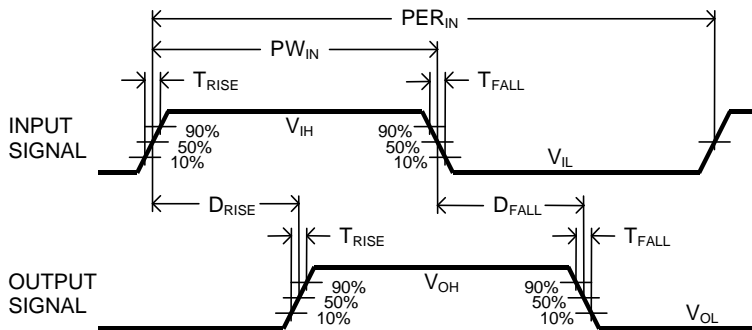
Package Dimensions

PASSIVE DELAY LINE TEST SPECIFICATIONS

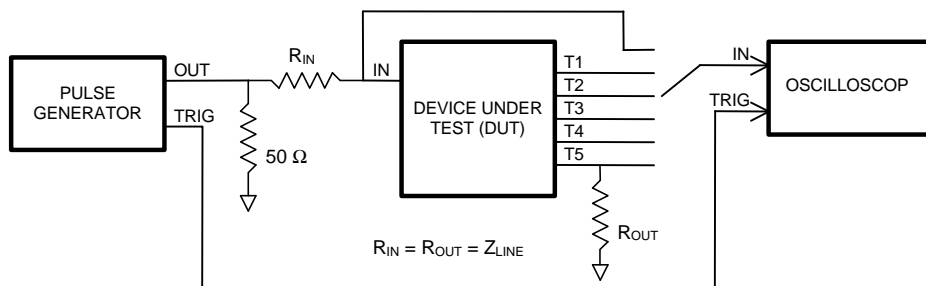
TEST CONDITIONS

INPUT:		OUTPUT:	
Ambient Temperature:	25°C ± 3°C	R_{load}:	10MΩ
Input Pulse:	High = 3.0V typical Low = 0.0V typical	C_{load}:	10pf
Source Impedance:	50Ω Max.	Threshold:	50% (Rising & Falling)
Rise/Fall Time:	3.0 ns Max. (measured at 10% and 90% levels)		
Pulse Width (T_D ≤ 75ns):	PW _{IN} = 100ns		
Period (T_D ≤ 75ns):	PER _{IN} = 1000ns		
Pulse Width (T_D > 75ns):	PW _{IN} = 2 x T _D		
Period (T_D > 75ns):	PER _{IN} = 10 x T _D		

NOTE: The above conditions are for test only and do not in any way restrict the operation of the device.



Timing Diagram For Testing



Test Setup

This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.