

## 5-TAP DIGITAL DELAY LINE ("JAN" LISTED)

### FEATURES

- MIL-STD-883, 1.2.1 COMPLIANT
- MIL-H-38534 COMPLIANT
- MIL-D-83532 QPL APPROVED
- TTL SCHOTTKY BUFFERED INPUTS AND OUTPUTS
- HERMETICALLY SEALED METAL PACKAGE
- LOW PROFILE 14-PIN DIP
- CUSTOMS ALSO AVAILABLE

### SPECIFICATIONS

#### INPUT TEST CONDITIONS:

- SUPPLY VOLTAGE ( $V_{cc}$ )
- PULSE VOLTAGE
- RISE TIME
- PULSE WIDTH
- DUTY CYCLE

5.0 V<sub>cc</sub>  
Logic 1 = 3.3 Volts  
Logic 0 = 0.0 Volts  
3.0 nSec max.  
2.5 x max. delay  
50% max.

#### DRIVE CAPABILITIES:

- LOGIC 0
- LOGIC 1

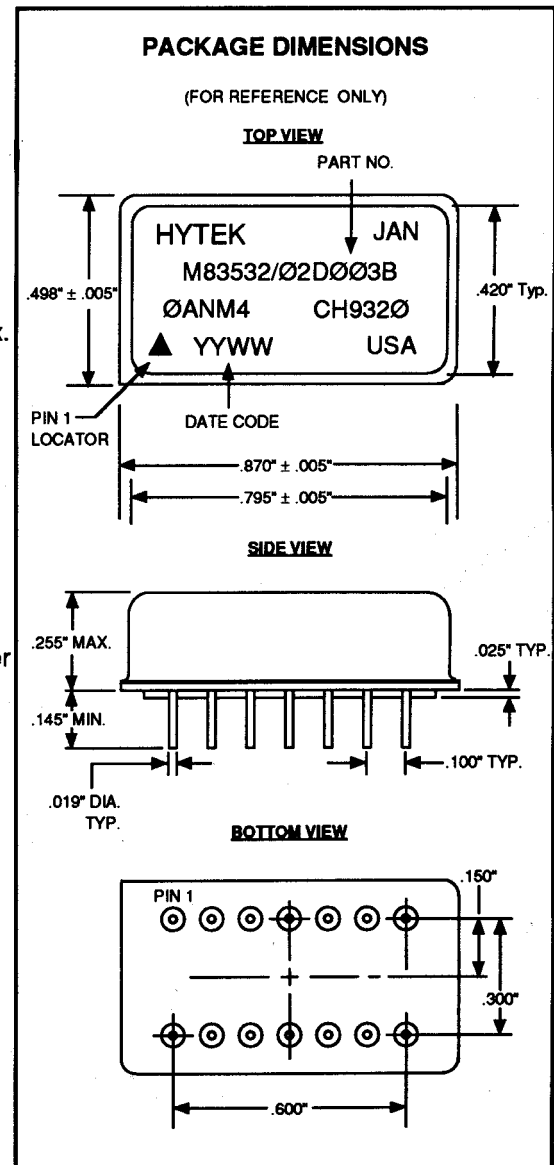
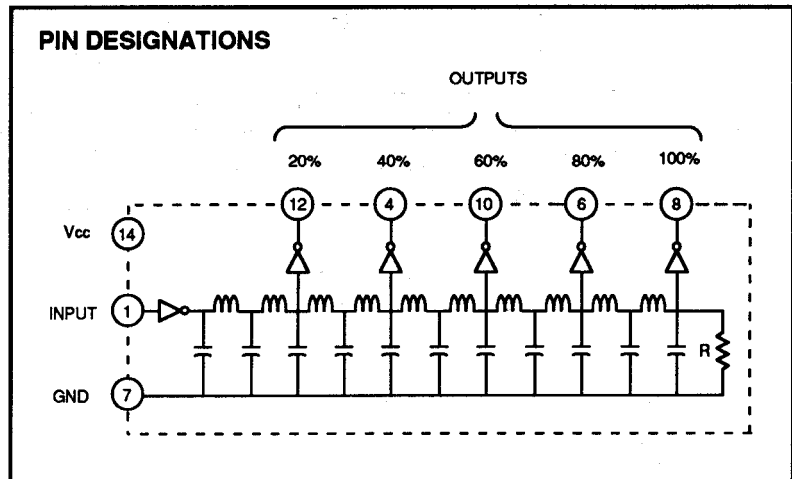
10 TTL Schottky loads/tap max.  
20 TTL Schottky loads/unit max. (20 mA max.)  
20 TTL Schottky loads/tap and unit max. (-1 mA max.)

#### OPERATING CHARACTERISTICS:

- OUTPUT RISE TIME ( $t_{ro}$ )
- TOTAL DELAY TOLERANCE
- SUPPLY CURRENT
- SUPPLY VOLTAGE ( $V_{cc}$ )
- LOGIC 1 INPUT CURRENT
- LOGIC 0 INPUT CURRENT
- LOGIC 1 OUTPUT VOLTAGE
- LOGIC 0 OUTPUT VOLTAGE
- SHORT CIRCUIT OUTPUT CURRENT

4 nSec. max. (measured from 0.75V to 2.4V)  
 $\pm 2$  nSec. or  $\pm 5\%$  whichever is greater at 25° C  
 $\pm 3$  nSec. or  $\pm 8\%$  whichever is greater over operating temperature range.  
75 mA max.  
4.5 to 5.5 V<sub>cc</sub>  
50  $\mu$ A @  $V_{cc} = 5.5$  V and  $V_{IH} = 2.7$  V  
-2 mA max. @  $V_{cc} = 5.5$  V and  $V_{IL} = 0.5$  V  
2.5V min., 3.4 V typical  
0.5V max.  
-40 mA min. to -150 mA max.  
 $V_{cc} = 5.5$  V, one output shorted for max. 1 Sec. duration

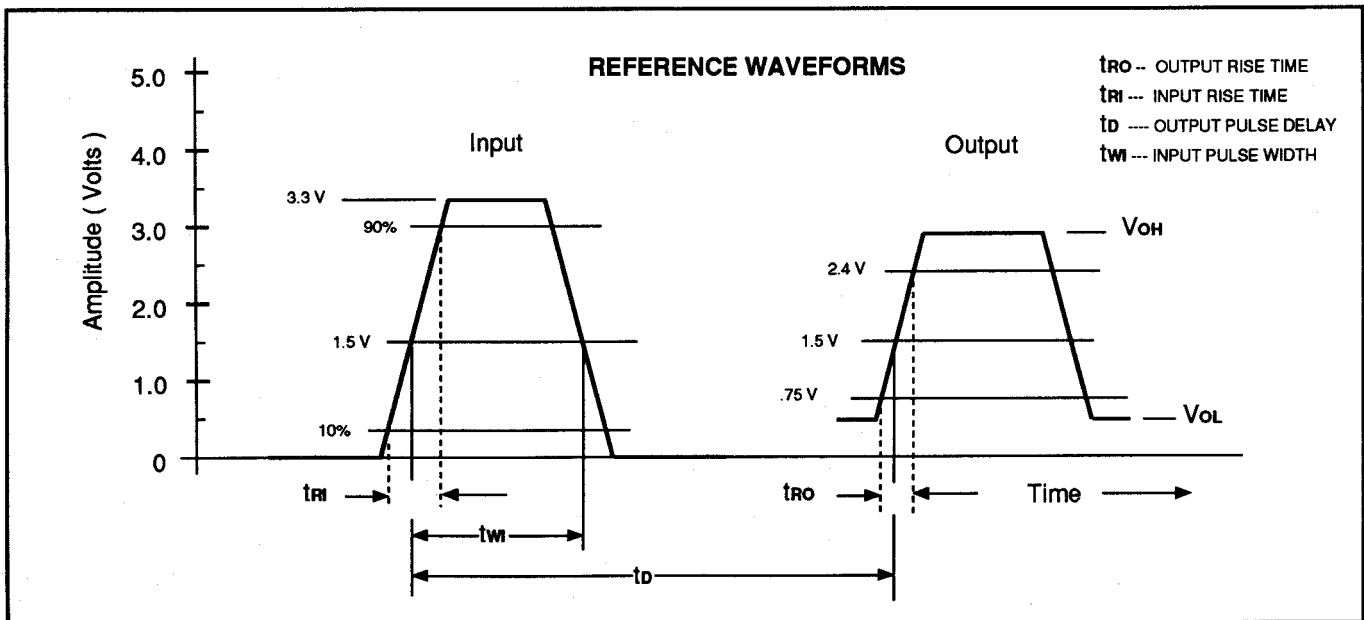
- OPERATING TEMPERATURE -55° C to +125° C



DELAYED OUTPUT CHARACTERISTICS

Hytek Part No.	Mil. Part No. ( 5 Sections min.)	Mil. Part No. (10 Sections min.)	Delays at 25° C in nSeconds (td) †				
			TAP NUMBER				
			1	2	3	4	5
8002025	M83532/01D001B	M83532/02D001B*	5.0 ±2 nS	10.0 ±2 nS	15.0 ±2 nS	20.0 ±2 nS	25.0 ±2 nS
8002030	M83532/01D002B	M83532/02D002B*	6.0 ±2 nS	12.0 ±2 nS	18.0 ±2 nS	24.0 ±2 nS	30.0 ±2 nS
8002035	M83532/01D003B	M83532/02D003B*	7.0 ±2 nS	14.0 ±2 nS	21.0 ±2 nS	28.0 ±2 nS	35.0 ±2nS
8002040	M83532/01D004B*	M83532/02D004B	8.0 ±2 nS	16.0 ±2 nS	24.0 ±2 nS	32.0 ±5%	40.0 ±2nS
8002045	M83532/01D005B*	M83532/02D005B	9.0 ±2 nS	18.0 ±2 nS	27.0 ±2nS	36.0 ±2nS	45.0 ±5%
8002050	M83532/01D006B*	M83532/02D006B	10.0 ±2 nS	20.0 ±2 nS	30.0 ±2 nS	40.0 ±2nS	50.0 ±5%
8002055	M83532/01D007B*	M83532/02D007B	11.0 ±2 nS	22.0 ±2 nS	33.0 ±2nS	44.0 ±5%	55.0 ±5%
8002060	M83532/01D008B*	M83532/02D008B	12.0 ±2 nS	24.0 ±2nS	36.0 ±2nS	48.0 ±5%	60.0 ±5%
8002065	M83532/01D009B*	M83532/02D009B	13.0 ±2 nS	26.0 ±2nS	39.0 ±2nS	52.0 ±5%	65.0 ±5%
8002070	M83532/01D010B*	M83532/02D010B	14.0 ±2 nS	28.0 ±2nS	42.0 ±5%	56.0 ±5%	70.0 ±5%
8002075	M83532/01D011B*	M83532/02D011B	15.0 ±2 nS	30.0 ±2nS	45.0 ±5%	60.0 ±5%	75.0 ±5%
8002080	M83532/01D012B*	M83532/02D012B	16.0 ±2nS	32.0 ±2nS	48.0 ±5%	64.0 ±5%	80.0 ±5%
8002090	M83532/01D013B*	M83532/02D013B	18.0 ±2nS	36.0 ±2nS	54.0 ±5%	72.0 ±5%	90.0 ±5%
8002100	M83532/01D014B*	M83532/02D014B	20.0 ±2nS	40.0 ±2nS	60.0 ±5%	80.0 ±5%	100.0 ±5%
8002125	M83532/01D015B*	M83532/02D015B	25.0 ±2nS	50.0 ±5%	75.0 ±5%	100.0 ±5%	125.0 ±5%
8002150	M83532/01D016B*	M83532/02D016B	30.0 ±2nS	60.0 ±5%	90.0 ±5%	120.0 ±5%	150.0 ±5%
8002175	M83532/01D017B*	M83532/02D017B	35.0 ±2nS	70.0 ±5%	105.0 ±5%	140.0 ±5%	175.0 ±5%
8002200	M83532/01D018B*	M83532/02D018B	40.0 ±2nS	80.0 ±5%	120.0 ±5%	160.0 ±5%	200.0 ±5%
8002225	M83532/01D019B*	M83532/02D019B	45.0 ±5%	90.0 ±5%	135.0 ±5%	180.0 ±5%	225.0 ±5%
8002250	M83532/01D020B*	M83532/02D020B	50.0 ±5%	100.0 ±5%	150.0 ±5%	200.0 ±5%	250.0 ±5%

† Delay tolerances are ± 3 nSec. or 8% whichever is greater over the operating temperature range.  
\* Contact the factory.



Hytek manufactures active delay lines and custom hybrid circuits using thick film technology. The manufacturing facility, located in Carson City, Nevada is certified and qualified to MIL-STD-1772 and qualified to produce delay lines that are compliant to MIL-D-83532. In accordance with these requirements, active delay lines are manufactured, tested, and screened in compliance with method MIL-H-38534. The hybrid delay lines are enclosed in metal packages which are hermetically sealed using inert gases. The manufacturing, testing, and quality systems utilized by Hytek insure the highest reliability product possible is supplied for the harshest military environments.