

hytek**HY5010****10 TAP DIGITAL DELAY LINE
(Hi-Rel Package)****FEATURES**

- TTL SCHOTTKY BUFFERED INPUTS AND OUTPUTS
- HERMETICALLY SEALED METAL PACKAGE
- LOW PROFILE 14-PIN DIP
- HIGH MTBF
- CUSTOMS ALSO AVAILABLE

SPECIFICATIONS**INPUT TEST CONDITIONS:**

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

5.0 V_{DC}
 Logic 1 = 3.3 Volts
 Logic 0 = 0.0 Volts
 3.0 nSec max.
 2.5 x max. delay
 50% max.

DRIVE CAPABILITIES:

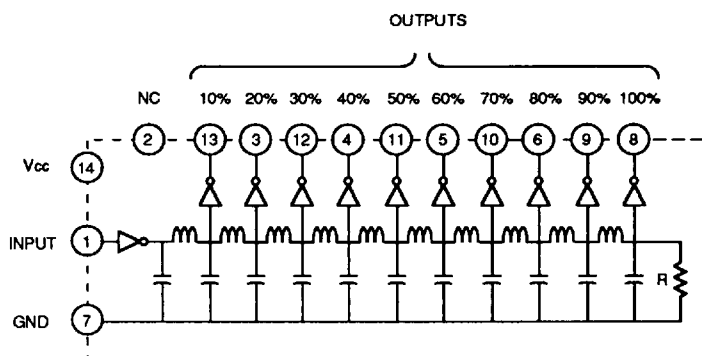
- LOGIC 0
- LOGIC 1

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
- LOGIC 1 INPUT VOLTAGE
- LOGIC 0 INPUT VOLTAGE
- SHORT CIRCUIT OUTPUT CURRENT
- OPERATING TEMPERATURE
- STORAGE TEMPERATURE
- HERMETICITY

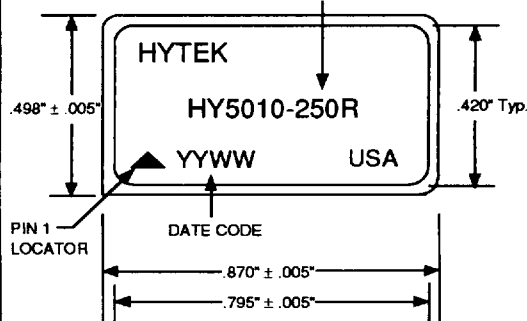
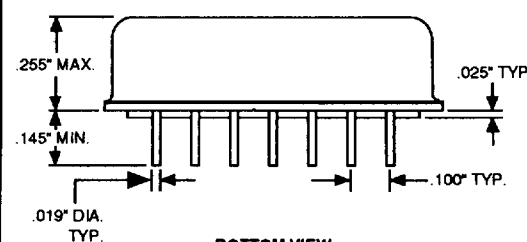
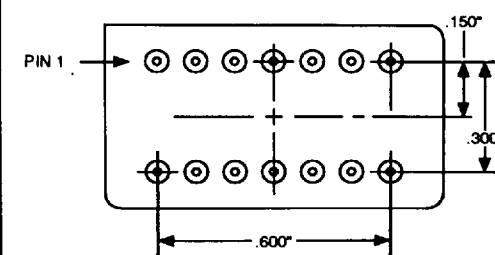
4 nSec. max. (measured from 0.75V to 2.4V)
 ± 2 nSec. or $\pm 5\%$ whichever is greater.
 65 mA max., 45mA typical
 4.75 to 5.25 V_{DC}
 50 μA @ $V_{CC} = 5.25$ V and $V_{IH} = 2.7$ V
 -2 mA max. @ $V_{CC} = 5.25$ V and $V_{IL} = 0.5$ V
 2.7V min., 3.4 V typical
 0.5V max.
 2V min. TO 5.25V max.
 0.8 V max.
 -40 mA min. to -100 mA max.
 $V_{CC} = 5.25$ V, one output shorted for max. 1 Sec. duration
 0° C to 70° C
 (optional -55° C to +125° C)
 -55° C to 150° C
 leak rate $< 10^{-6}$ ATM. CC/S

PIN DESIGNATIONS**PACKAGE DIMENSIONS**

(FOR REFERENCE ONLY)

TOP VIEW

PART NO.

**SIDE VIEW****BOTTOM VIEW**

Specifications Subject to Change Without Notice.

HY5010**DELAYED OUTPUT CHARACTERISTICS**

Hytek Part No.*	Delays at 25° C in nSeconds (t _D) †									
	TAP NUMBER									
	1	2	3	4	5	6	7	8	9	10
HY5010-050R	5.0 ±2 nS	10.0 ±2 nS	15.0 ±2 nS	20.0 ±2 nS	25.0 ±2 nS	30.0 ±2 nS	35.0 ±2 nS	40.0 ±2 nS	45.0 ±5%	50.0 ±5%
HY5010-100R	10.0 ±2 nS	20.0 ±2 nS	30.0 ±2 nS	40.0 ±2 nS	50.0 ±5%	60.0 ±5%	70.0 ±5%	80.0 ±5%	90.0 ±5%	100.0 ±5%
HY5010-150R	15.0 ±2 nS	30.0 ±2 nS	45.0 ±5%	60.0 ±5%	75.0 ±5%	90.0 ±5%	105.0 ±5%	120.0 ±5%	135.0 ±5%	150.0 ±5%
HY5010-200R	20.0 ±2 nS	40.0 ±2 nS	60.0 ±5%	80.0 ±5%	100.0 ±5%	120.0 ±5%	140.0 ±5%	160.0 ±5%	180.0 ±5%	200.0 ±5%
HY5010-250R	25.0 ±2 nS	50.0 ±5%	75.0 ±5%	100.0 ±5%	125.0 ±5%	150.0 ±5%	175.0 ±5%	200.0 ±5%	225.0 ±5%	250.0 ±5%
HY5010-500R	50.0 ±5%	100.0 ±5%	150.0 ±5%	200.0 ±5%	250.0 ±5%	300.0 ±5%	350.0 ±5%	400.0 ±5%	450.0 ±5%	500.0 ±5%

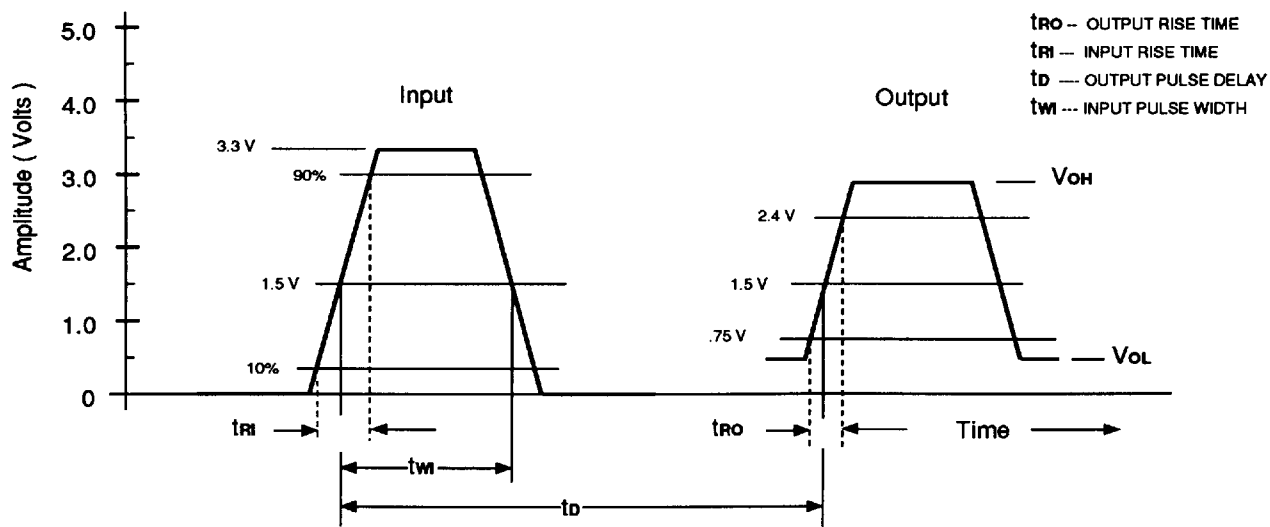
* Suffix designates:

R = Standard 0° C to + 70° C operation

M = Standard -55° C to + 125° C operation

† Delay tolerances for "R" product are ± 2 nSec. or 5% whichever is greater over the operating temperature range.

Delay tolerances for "M" product are ± 3 nSec. or 8% whichever is greater over the operating temperature range.

REFERENCE WAVEFORMS

2-15-93