

3 INPUT/3 OUTPUT 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:

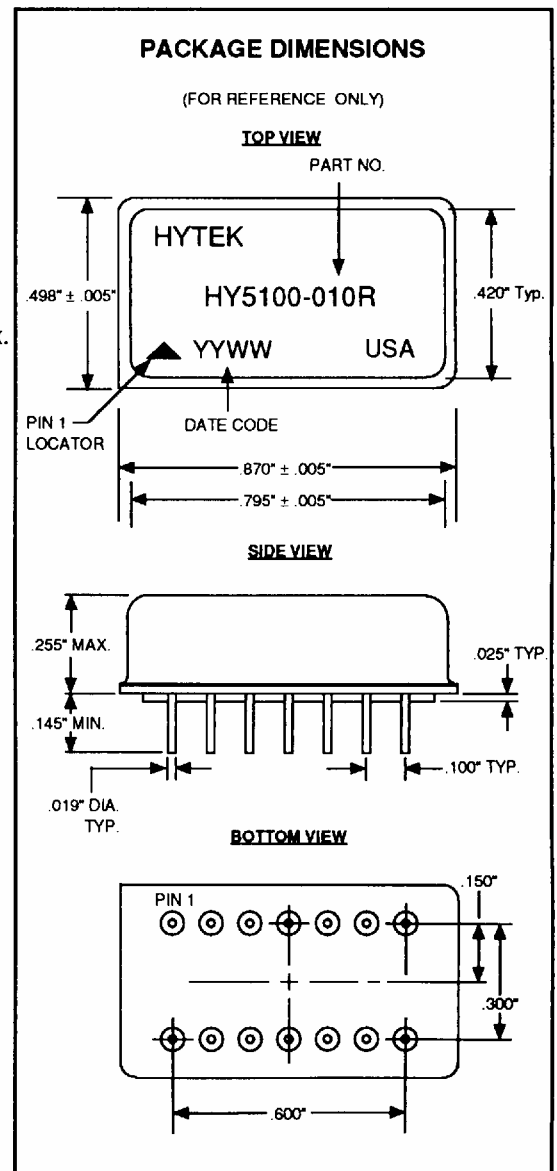
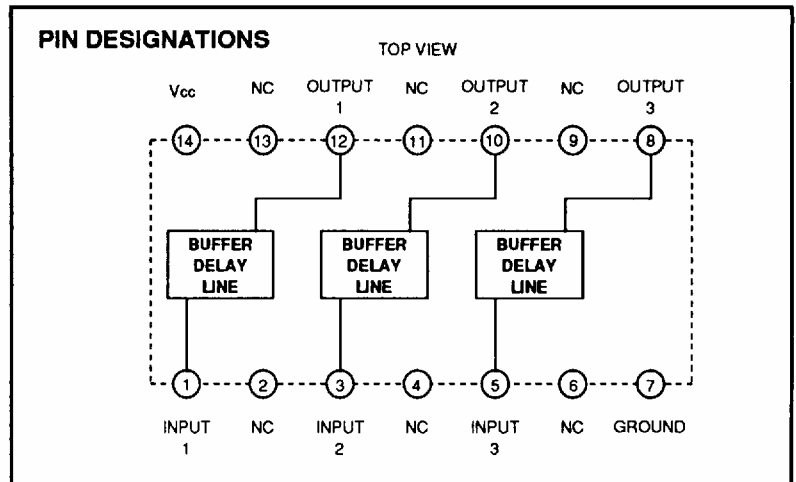
- SUPPLY VOLTAGE (V_{cc}) 5.0 V_{cc}
- PULSE VOLTAGE Logic 1 = 3.3 Volts
Logic 0 = 0.0 Volts
- RISE TIME 3.0 nSec max.
- PULSE WIDTH 2.5 x max. delay
- DUTY CYCLE 50% max.

DRIVE CAPABILITIES:

- LOGIC 0 10 TTL Schottky loads/tap max.
20 TTL Schottky loads/unit max. (20 mA max.)
- LOGIC 1 20 TTL Schottky loads/tap and unit max. (-1 mA max.)

OPERATING CHARACTERISTICS:

- OUTPUT RISE TIME (t_{ro}) 4 nSec. max. (measured from 0.75V to 2.4V)
- TOTAL DELAY TOLERANCE ± 2 nSec. or $\pm 5\%$ whichever is greater.
- SUPPLY CURRENT 65 mA max., 45mA typical
- SUPPLY VOLTAGE (V_{cc}) 4.75 to 5.25 V_{cc}
- LOGIC 1 INPUT CURRENT 50 μA @ $V_{cc} = 5.25$ V and $V_{IH} = 2.7$ V
- LOGIC 0 INPUT CURRENT -2 mA max. @ $V_{cc} = 5.25$ V and $V_{IL} = 0.5$ V
- LOGIC 1 OUTPUT VOLTAGE 2.7V min., 3.4 V typical
- LOGIC 0 OUTPUT VOLTAGE 0.5V max.
- LOGIC 1 INPUT VOLTAGE 2V min. TO 5.25V max.
- LOGIC 0 INPUT VOLTAGE 0.8 V max.
- SHORT CIRCUIT OUTPUT CURRENT -40 mA min. to -100 mA max. $V_{cc} = 5.25$ V, one output shorted for max. 1 Sec. duration
- OPERATING TEMPERATURE 0° C to 70° C (optional -55° C to +125° C)
- STORAGE TEMPERATURE -55° C to 150° C
- HERMETICITY leak rate $< 10^{-6}$ ATM. CC/S

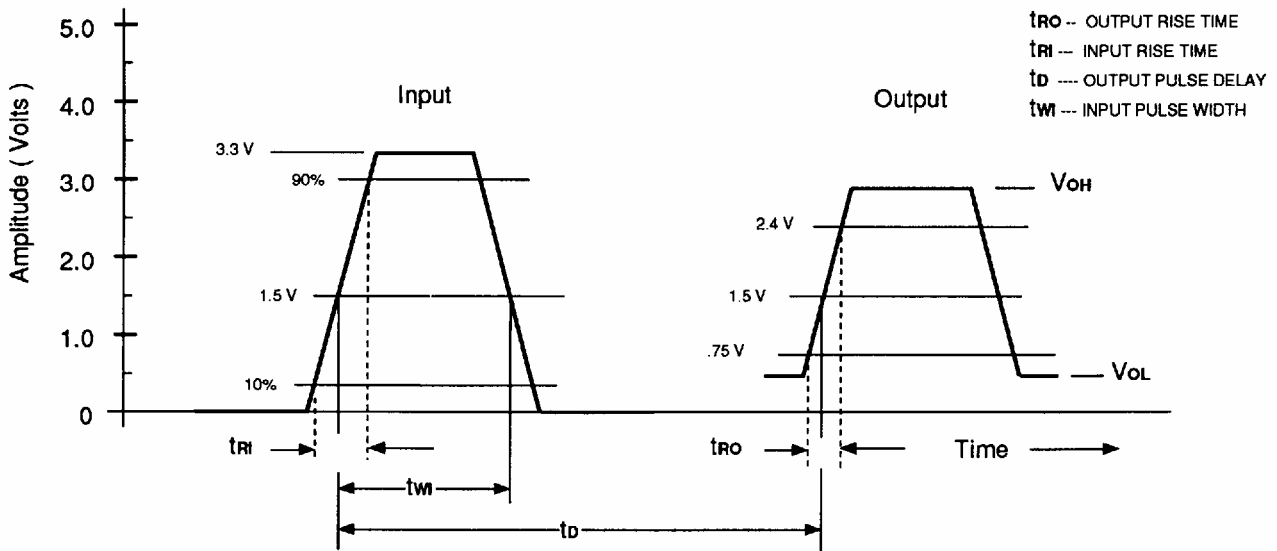


DELAYED OUTPUT CHARACTERISTICS

Hytek Part No.*	Delay at Each Output (t ₀) nSec.
HY5100-010R	10.0 ±2 nS
HY5100-014R	12.0 ±2 nS
HY5100-016R	14.0 ±2 nS
HY5100-018R	16.0 ±2 nS
HY5100-020R	18.0 ±2nS
HY5100-025R	20.0 ±2 nS
HY5100-030R	25.0 ±2 nS
HY5100-035R	30.0 ±2 nS
HY5100-040R	40.0 ±5%
HY5100-045R	45.0 ±5%
HY5100-050R	50.0 ±5%

* Suffix designates:
 R = standard 0° C to 70° C operation
 M = standard -55° C to +125° C operation

REFERENCE WAVEFORMS



2-15-93