

# 10-TAP DIGITAL DELAY LINE (Hi-Rel Package)

## HY5010

### FEATURES

- TTL Schottky buffered input and outputs
- Hermetically sealed metal package
- Low profile 14-pin DIP
- High MTBF
- Customs also available

### SPECIFICATIONS

#### INPUT TEST CONDITIONS:

SUPPLY VOLTAGE (V<sub>CC</sub>) 5.0 VDC  
PULSE VOLTAGE Logic 1 = 3.2 volts  
Logic 0 = 0.0 volts

RISE TIME 3.0 nsec.  
PULSE WIDTH 2 x total delay  
DUTY CYCLE 20%

#### DRIVE CAPABILITIES:

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

#### LOGIC 1

#### OPERATING CHARACTERISTICS:

OUTPUT RISE TIME 4 nsec. max. (measured from 0.75V to 2.4V)  
TOTAL DELAY TOLERANCE  $\pm 2$  nsec. or  $\pm 5\%$  whichever is greater  
SUPPLY CURRENT 120 mA max.,  
SUPPLY VOLTAGE (V<sub>CC</sub>) 4.75 to 5.25 VDC  
LOGIC 1 INPUT CURRENT 100  $\mu$ A @ V<sub>CC</sub> = 5.25V and V<sub>IH</sub> = 2.70V  
LOGIC 0 INPUT CURRENT -4 mA max. @ V<sub>CC</sub> = 5.25V and V<sub>IL</sub> = 0.50V  
LOGIC 1 OUTPUT VOLTAGE 2.7V min., 3.4V typical  
LOGIC 0 OUTPUT VOLTAGE 0.5V max.  
LOGIC 1 INPUT VOLTAGE 2V min. to 5.25V max.  
LOGIC 0 INPUT VOLTAGE 0.8V max.  
SHORT CIRCUIT OUTPUT CURRENT -40 mA min. to -100 mA max.  
V<sub>CC</sub> = 5.25V, 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 +125°C  
HERMETICITY leak rate  $< 1 \times 10^{-8}$  ATM. CC/S

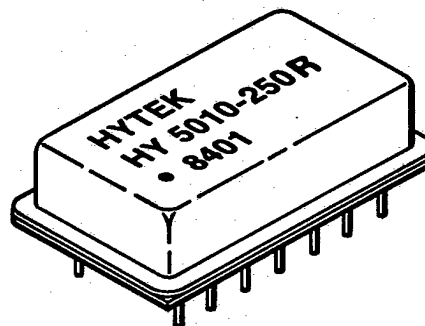
#### DELAY AT EA. TAP IN NSEC.

| Part No.†   | Total Delay (nsec.) | Tap-To-Tap Delay (nsec.) |
|-------------|---------------------|--------------------------|
| HY5010-050R | 50 $\pm$ 2.5        | 5 $\pm$ 1.0*             |
| HY5010-100R | 100 $\pm$ 5.0       | 10 $\pm$ 2.0             |
| HY5010-150R | 150 $\pm$ 7.5       | 15 $\pm$ 3.0             |
| HY5010-200R | 200 $\pm$ 10.0      | 20 $\pm$ 4.0             |
| HY5010-250R | 250 $\pm$ 13.5      | 25 $\pm$ 5.0             |
| HY5010-500R | 500 $\pm$ 25.0      | 50 $\pm$ 10.0            |

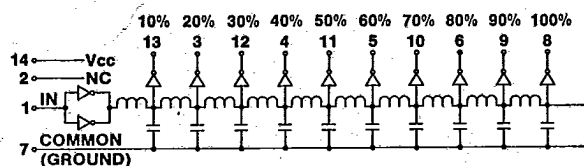
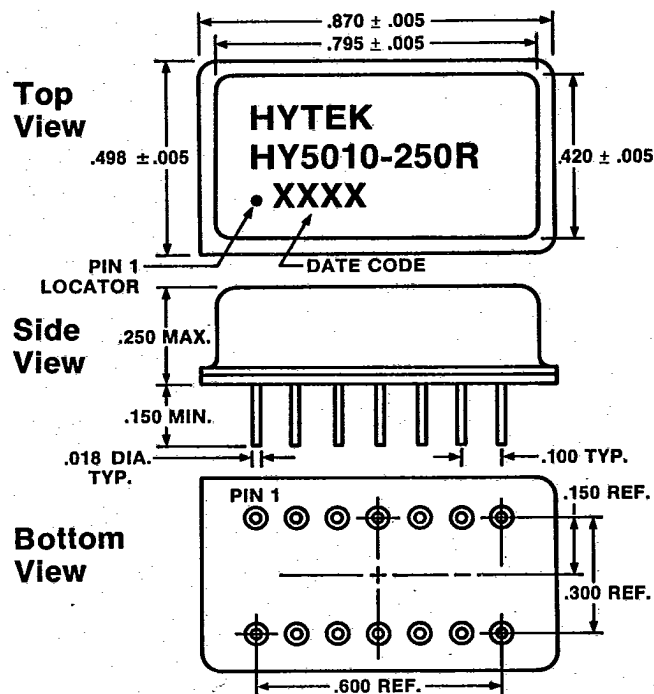
† Suffix designates:

R = standard 0°C to 70°C operation  
M = standard -55°C to +125°C operation  
Z = 883 screening

\* HY5010-050 tolerance on first tap is +2, -1 nsec.



### Dimensions (Inches)



Specifications Subject to Change Without Notice

**hytek** microsystems  
incorporated

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