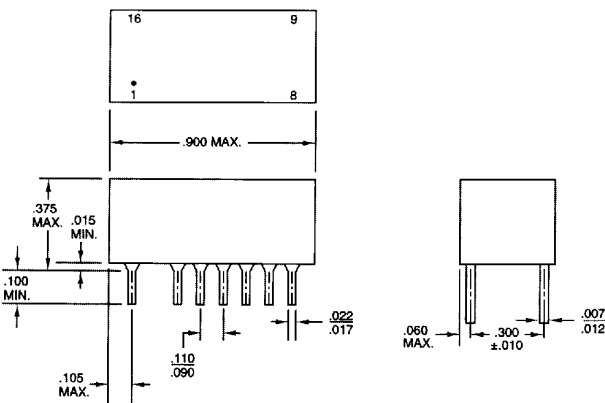
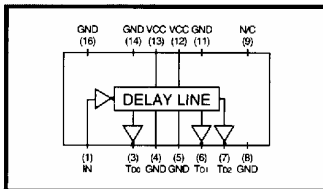


# High-Speed RISC Delay Modules

8-11-81

TEC3016	TEC3020	TEC3025	TEC3033	TEC3040
Tap Delay (ns)	Tap Delay (ns)	Tap Delay (ns)	Tap Delay (ns)	Tap Delay (ns)
$T_{D0}$ = REF.	$T_{D0}$ = REF.	$T_{D0}$ = REF.	$T_{D0}$ = REF.	$T_{D0}$ = REF.
$T_{D1}$ = 6.0 ± .45	$T_{D1}$ = 6.0 ± .45	$T_{D1}$ = 6.0 ± .45	$T_{D1}$ = 4.5 ± .35	$T_{D1}$ = 3.5 ± .25
$T_{D2}$ = 16.0 ± .70	$T_{D2}$ = 14.0 ± .60	$T_{D2}$ = 12.0 ± .45	$T_{D2}$ = 9.0 ± .35	$T_{D2}$ = 7.0 ± .25
$F_{IN}$ = 32.0 MHz	$F_{IN}$ = 40.0 MHz	$F_{IN}$ = 50.0 MHz	$F_{IN}$ = 66.67 MHz	$F_{IN}$ = 80.0 MHz

Tap delays are referenced to  $T_{D0}$ .  $T_{D0}$  = 7 ns typical.  
 $T_D$  measured at 1.5V level of positive edge with 25 pf (typ.) loading per tap.  
 Test conditions:  $T_a$  = 25°C;  $V_{CC}$  = 5.0 ± .01V.  
 Temperature coefficient of delay = 800 ppm/°C, -40°C to 85°C.  
 Delay changes ± 0.10 ns or 2% (whichever is greater) for a 5% increase or decrease in supply voltage.



**Notes**  
 Pin numbers shown are for reference only and are not necessarily marked on unit.  
 Lead material is electro tin plated (alloy 42) or solder dipped.  
 All specifications are subject to change without notice.

## RISC Delay Module

- ▶ For R3000 cache memory timing applications.
- ▶ Five input frequencies from 32 to 80 MHz available.
- ▶ Advanced CMOS, FAST, or Schottky TTL compatible inputs.
- ▶ Precise tap to tap delays.
- ▶ R3000 compatible outputs:  
 $V_{OH}$  = 3.0V min.,  $V_{OL}$  = .4V max.  
 Rise time = 2.5 ns max.
- ▶ 16-pin DIP transfer molded package.
- ▶ Custom designs available upon request.
- ▶ Military models with temperature range -55 to +125°C and ceramic package IC. Add suffix "M" to part number.
- ▶ Military models as above, but with ceramic package IC screened to Mil-Std 883C. Add suffix "MX" to part number.
- ▶ Military models as "MX" above, but with in-house burn-in and thermal shock, add suffix "MY".

Other RISC products:

## RISC Clock Oscillator Module

- ▶ Combines clock oscillator and delay line functions in one package.
- ▶ Need only supply  $V_{CC}$  to generate four-phase clock edges.
- ▶ Outputs similar to those of RISC delay module.
- ▶ Five frequency options available.

## RISC Frequency Doubler Module

- ▶ Doubles input frequency.
- ▶ Connecting to SYSCLK output of microprocessor allows timing and gating functions at 2X system clock frequency.
- ▶ Five frequency options available.

NOTE: Contact factory for additional information about Technitrol RISC products.

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