

bel/ defining a degree of excellence

DIGITAL DELAY OSCILLATOR SERIES 0458

This delay oscillator works as an asynchronous start-stop free running clock pulse generator. The oscillator is intended as the primary control element of state machines used in digital controllers. The assertion of the input (high) trigger causes the oscillator to free run, producing TR thru T4 clock pulses for as long as the input is asserted. Oscillation ceases when the input trigger is negated.

TECHNICAL INFORMATION

TEST CONDITIONS

Pulse Voltage 3.2 Volts
Rise Time 3.0 Nsec (10%-90%)
Pulse Width 5.0 Nsec min.
Supply Voltage, Vcc 5.0 Volts
Ambient Temperature 25°C

PERFORMANCE CHARACTERISTICS

Logic 1 Input Current
50 Microamp max.
Logic 0 Input Current
-2 Milliamp max.
Logic 1 Output Voltage
2.7 Volts min.
Logic 0 Output Voltage
0.5 Volts max.

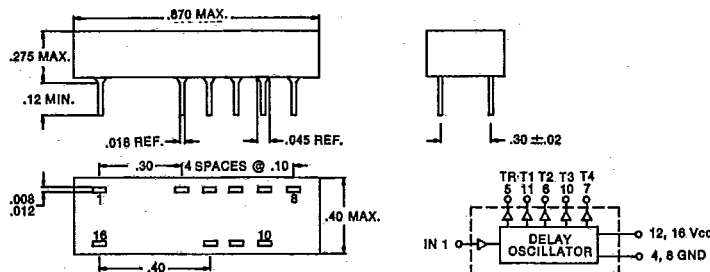
Period Tolerance
± 7%
Delay Tolerance From Tap To Tap
± 2 Nsec or 5% whichever is greater

All specified Performance Characteristics apply at above listed Test Conditions.

ELECTRICAL CHARACTERISTICS

Supply Voltage, Vcc
4.75 To 5.25 Volts
Operating Temperature Range
0°C To 70°C
Temperature Coefficient Of Total Delay
500PPM/°C Typical

- Compatible with TTL and DTL circuits
- Other delays and tolerances upon request
- Square wave on all outputs



Part Number	Period 1, 3	Tap 1 1, 3, 4	Tap 2 1, 3, 4	Tap 3 1, 3, 4	Tap 4 1, 3, 4	Rise Time 2, 3
0458-0060-01	60NS	20NS	30NS	40NS	50NS	4NS
0458-0070-01	70NS	20NS	35NS	50NS	60NS	4NS
0458-0080-01	80NS	20NS	40NS	60NS	70NS	4NS
0458-0090-01	90NS	20NS	45NS	65NS	80NS	4NS
0458-0100-01	100NS	30NS	50NS	70NS	90NS	4NS
0458-0110-01	110NS	30NS	55NS	75NS	100NS	4NS

- 1 All times measured at 1.5V leading edge only
2 Rise time measured from .75V to 2.4V level
3 Measured with no loads on taps
4 Delays are relative to Tap R (The delay from input to Tap R is 4NS TYP)

TIMING DIAGRAM

