

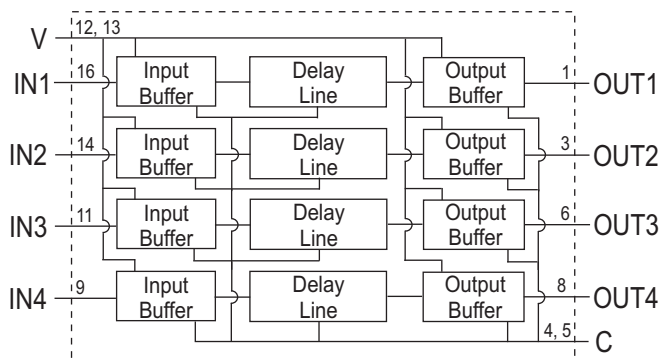
Multiple (4) Advanced CMOS Logic Delay Line

The Multiple (4) Advanced CMOS Logic Delay Lines manufactured by Engineered Components Company are designed to provide an output waveform that reproduces the input waveform after a set amount of delay time has elapsed. These delay lines are non-inverting. The delay times are calibrated to the listed tolerances on the rising edge delays. Each module consists of 4 separate delay lines, each isolated and individually buffered.

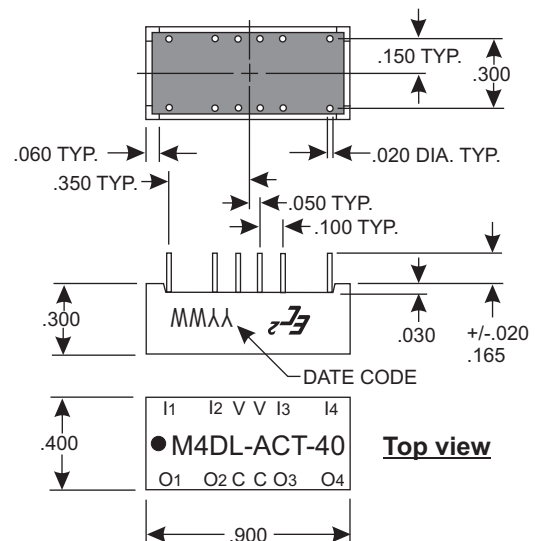
The MTBF on these modules, when calculated per MIL-HDBK-217, for a 50 deg.C ground fixed environment and with 50VDC applied, is in excess of 1.1 million hours. The temperature coefficient of delay is less than 200 ppm/deg.C over the operating temperature range of -40 to +85 deg. C.

The module is provided in a 16-pin DIP package, fully encapsulated in epoxy resin and is housed in a Diallyl Phthalate case, blue in color. The case marking is applied by silkscreen using white epoxy paint. The 12 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

BLOCK DIAGRAM



MECHANICAL DIAGRAM



Product Selection Table

Part Number	Output Delay and Tolerance (in ns)
M4DL-ACT-6	6.0+/-1.0
M4DL-ACT-7	7.0+/-1.0
M4DL-ACT-8	8.0+/-1.0
M4DL-ACT-9	9.0+/-1.0
M4DL-ACT-10	10.0+/-1.0
M4DL-ACT-11	11.0+/-1.0
M4DL-ACT-12	12.0+/-1.0
M4DL-ACT-13	13.0+/-1.0
M4DL-ACT-14	14.0+/-1.0
M4DL-ACT-15	15.0+/-1.0
M4DL-ACT-16	16.0+/-1.0
M4DL-ACT-17	17.0+/-1.0
M4DL-ACT-18	18.0+/-1.0
M4DL-ACT-19	19.0+/-1.0
M4DL-ACT-20	20.0+/-1.0
M4DL-ACT-21	21.0+/-1.0
M4DL-ACT-22	22.0+/-1.0
M4DL-ACT-23	23.0+/-1.0
M4DL-ACT-24	24.0+/-1.0
M4DL-ACT-25	25.0+/-1.0

Product Selection Table (Cont.)

Part Number	Output Delay and Tolerance (in ns)
M4DL-ACT-30	30.0+/-1.5
M4DL-ACT-35	35.0+/-1.5
M4DL-ACT-40	40.0+/-1.5
M4DL-ACT-45	45.0+/-2.0
M4DL-ACT-50	50.0+/-2.0
M4DL-ACT-55	55.0+/-2.0
M4DL-ACT-60	60.0+/-2.0
M4DL-ACT-65	65.0+/-2.5
M4DL-ACT-70	70.0+/-2.5
M4DL-ACT-75	75.0+/-2.5
M4DL-ACT-80	80.0+/-2.5
M4DL-ACT-85	85.0+/-3.0
M4DL-ACT-90	90.0+/-3.0
M4DL-ACT-95	95.0+/-3.0
M4DL-ACT-100	100.0+/-3.0
M4DL-ACT-125	125.0+/-4.0
M4DL-ACT-150	150.0+/-4.5
M4DL-ACT-175	175.0+/-5.0
M4DL-ACT-200	200.0+/-6.0

Special modules can often be manufactured to provide for customer specific applications.

Operating Specifications:

All measurements made at 25 deg. C
 All measurements made with Vcc = +5VDC
 All measurements made with (1) ACT output load

Operating Temperature: -40 to +85 deg. C
 Storage Temperature: -55 to +125 deg. C

Vcc Supply Voltage: 4.75 to 5.25VDC
 Vcc Supply Current:
 Constant "0" or "1" in = 1nA typical
 Constant 1 MHz square wave in = 25mA typical

Logic "High" Input:
 Voltage: 2.0VDC min. ; Vcc max.
 Logic "Low" Input:
 Voltage: 0.8 VDC max.
 Logic "High" Voltage Out: 4.3VDC min. @ -24mA
 Logic "Low" Voltage Out: 0.44VDC max. @ +24mA



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