

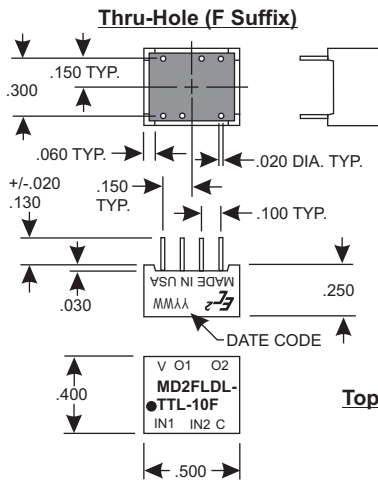
# Mini DIP Multiple (2) FAST TTL Logic Delay Line

The Mini DIP Multiple (2) FAST TTL 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 2 separate delay lines, each isolated and individually buffered.

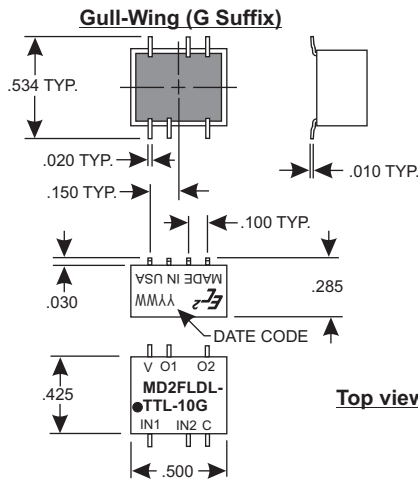
The MTBF on these modules, when calculated per MIL-HDBK-217, for a 50 deg.C ground fixed environment and with 50VDC applied, is in excess of 1.5 million hours. The temperature coefficient of delay is less than 1200 ppm/deg.C over the operating temperature range of 0 to +70 deg. C.

The module is provided in an 8-pin Mini 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 6 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

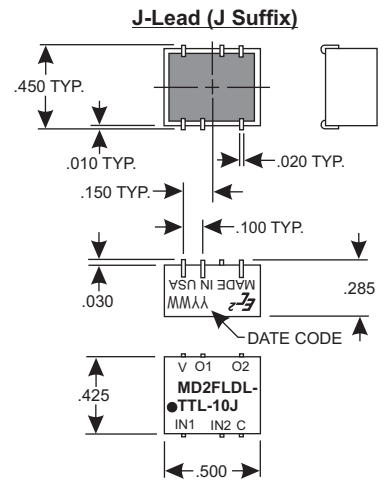
## MECHANICAL DIAGRAM



Top view



Top view



Top view

### Product Selection Table

(Add Suffixes for Lead designation, F, G, or J)

Part Number	Output Delay and Tolerance (in ns)
MD2FLDL-TTL-5	5.0+/-0.5
MD2FLDL-TTL-6	6.0+/-0.5
MD2FLDL-TTL-7	7.0+/-0.5
MD2FLDL-TTL-8	8.0+/-0.5
MD2FLDL-TTL-9	9.0+/-0.5
MD2FLDL-TTL-10	10.0+/-0.5
MD2FLDL-TTL-11	11.0+/-0.8
MD2FLDL-TTL-12	12.0+/-0.8
MD2FLDL-TTL-13	13.0+/-0.8
MD2FLDL-TTL-14	14.0+/-0.8
MD2FLDL-TTL-15	15.0+/-0.8
MD2FLDL-TTL-16	16.0+/-0.8
MD2FLDL-TTL-17	17.0+/-0.8
MD2FLDL-TTL-18	18.0+/-0.8
MD2FLDL-TTL-19	19.0+/-0.8
MD2FLDL-TTL-20	20.0+/-0.8
MD2FLDL-TTL-21	21.0+/-1.0
MD2FLDL-TTL-22	22.0+/-1.0
MD2FLDL-TTL-23	23.0+/-1.0
MD2FLDL-TTL-24	24.0+/-1.0
MD2FLDL-TTL-25	25.0+/-1.0

### Product Selection Table (Cont.)

(Add Suffixes for Lead designation, F, G, or J)

Part Number	Output Delay and Tolerance (in ns)
MD2FLDL-TTL-30	30.0+/-1.5
MD2FLDL-TTL-35	35.0+/-1.5
MD2FLDL-TTL-40	40.0+/-1.5
MD2FLDL-TTL-45	45.0+/-2.0
MD2FLDL-TTL-50	50.0+/-2.0
MD2FLDL-TTL-55	55.0+/-2.0
MD2FLDL-TTL-60	60.0+/-2.0
MD2FLDL-TTL-65	65.0+/-2.5
MD2FLDL-TTL-70	70.0+/-2.5
MD2FLDL-TTL-75	75.0+/-2.5
MD2FLDL-TTL-80	80.0+/-2.5
MD2FLDL-TTL-85	85.0+/-3.0
MD2FLDL-TTL-90	90.0+/-3.0
MD2FLDL-TTL-95	95.0+/-3.0
MD2FLDL-TTL-100	100.0+/-3.0
MD2FLDL-TTL-125	125.0+/-4.0
MD2FLDL-TTL-150	150.0+/-4.5
MD2FLDL-TTL-175	175.0+/-5.0
MD2FLDL-TTL-200	200.0+/-6.0
MD2FLDL-TTL-225	225.0+/-7.0
MD2FLDL-TTL-250	250.0+/-8.0

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) FAST TTL output load

Operating Temperature: 0 to +70 deg. C  
 Storage Temperature: -55 to +125 deg. C

Vcc Supply Voltage: 4.75 to 5.25VDC

Vcc Supply Current:

Constant "0" in = 60mA typical

Constant "1" in = 5mA typical

Logic "High" Input:

Voltage: 2.0VDC min. ; Vcc max.

Current: 2.7VDC = 20uA max. ; 5.5VDC = 1mA max.

Logic "Low" Input:

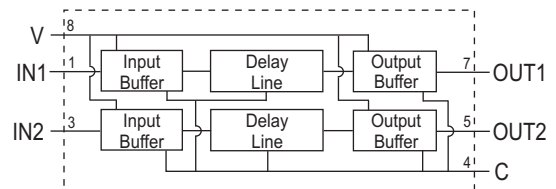
Voltage: 0.8 VDC max.

Current: -0.6mA max.

Logic "High" Voltage Out: 2.7VDC min.

Logic "Low" Voltage Out: 0.5VDC max.

### BLOCK DIAGRAM



**engineered components company**

A Division of Cornucopia Tool & Plastics, Inc. PO Box 1915, 448 Sherwood Rd., Paso Robles CA 93447

Phone: 805-369-0034

Fax: 805-369-0033

Web: www.ec2.com