

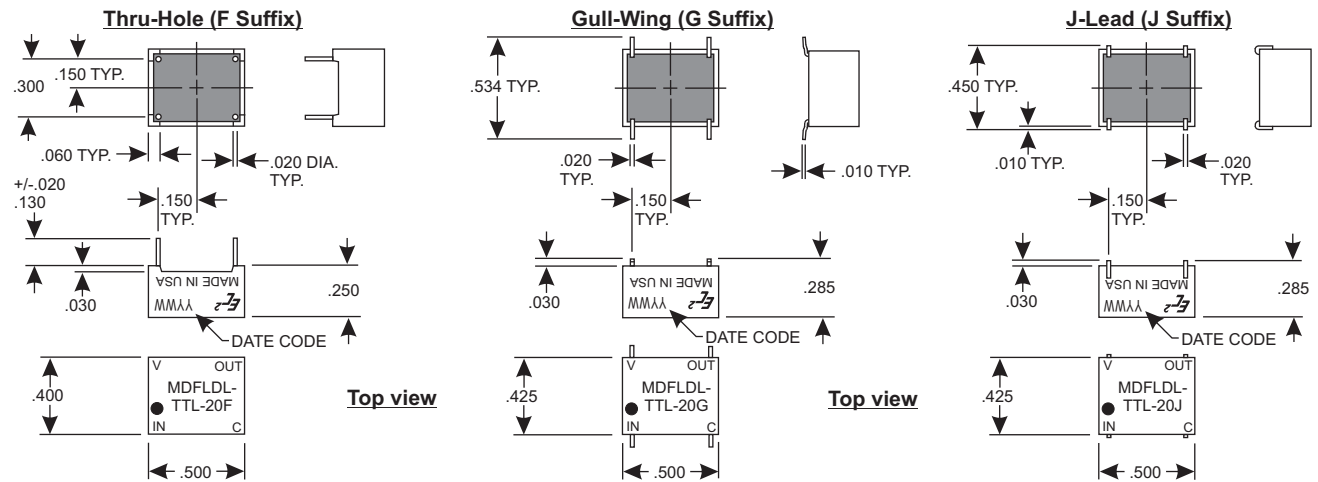
Mini DIP FAST TTL Logic Delay Line

The Mini DIP 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.

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 3 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 a 8-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 4 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

MECHANICAL DIAGRAM



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

| Part Number | Output Delay and Tolerance (in ns) |
|---------------|------------------------------------|
| MDFLDL-TTL-5 | 5.0+/-1.0 |
| MDFLDL-TTL-6 | 6.0+/-1.0 |
| MDFLDL-TTL-7 | 7.0+/-1.0 |
| MDFLDL-TTL-8 | 8.0+/-1.0 |
| MDFLDL-TTL-9 | 9.0+/-1.0 |
| MDFLDL-TTL-10 | 10.0+/-1.0 |
| MDFLDL-TTL-11 | 11.0+/-1.0 |
| MDFLDL-TTL-12 | 12.0+/-1.0 |
| MDFLDL-TTL-13 | 13.0+/-1.0 |
| MDFLDL-TTL-14 | 14.0+/-1.0 |
| MDFLDL-TTL-15 | 15.0+/-1.0 |
| MDFLDL-TTL-16 | 16.0+/-1.0 |
| MDFLDL-TTL-17 | 17.0+/-1.0 |
| MDFLDL-TTL-18 | 18.0+/-1.0 |
| MDFLDL-TTL-19 | 19.0+/-1.0 |
| MDFLDL-TTL-20 | 20.0+/-1.0 |
| MDFLDL-TTL-21 | 21.0+/-1.0 |
| MDFLDL-TTL-22 | 22.0+/-1.0 |
| MDFLDL-TTL-23 | 23.0+/-1.0 |
| MDFLDL-TTL-24 | 24.0+/-1.0 |
| MDFLDL-TTL-25 | 25.0+/-1.0 |
| MDFLDL-TTL-30 | 30.0+/-1.5 |
| MDFLDL-TTL-35 | 35.0+/-1.5 |
| MDFLDL-TTL-40 | 40.0+/-1.5 |

Product Selection Table (Cont.)
(Add Suffixes for Lead designation, F, G, or J)

| Part Number | Output Delay and Tolerance (in ns) |
|----------------|------------------------------------|
| MDFLDL-TTL-45 | 45.0+/-2.0 |
| MDFLDL-TTL-50 | 50.0+/-2.0 |
| MDFLDL-TTL-55 | 55.0+/-2.0 |
| MDFLDL-TTL-60 | 60.0+/-2.0 |
| MDFLDL-TTL-65 | 65.0+/-2.5 |
| MDFLDL-TTL-70 | 70.0+/-2.5 |
| MDFLDL-TTL-75 | 75.0+/-2.5 |
| MDFLDL-TTL-80 | 80.0+/-2.5 |
| MDFLDL-TTL-85 | 85.0+/-3.0 |
| MDFLDL-TTL-90 | 90.0+/-3.0 |
| MDFLDL-TTL-95 | 95.0+/-3.0 |
| MDFLDL-TTL-100 | 100.0+/-3.0 |
| MDFLDL-TTL-125 | 125.0+/-4.0 |
| MDFLDL-TTL-150 | 150.0+/-4.5 |
| MDFLDL-TTL-175 | 175.0+/-5.0 |
| MDFLDL-TTL-200 | 200.0+/-6.0 |
| MDFLDL-TTL-225 | 225.0+/-7.0 |
| MDFLDL-TTL-250 | 250.0+/-8.0 |
| MDFLDL-TTL-275 | 275.0+/-9.0 |
| MDFLDL-TTL-300 | 300.0+/-10.0 |
| MDFLDL-TTL-350 | 350.0+/-11.0 |
| MDFLDL-TTL-400 | 400.0+/-12.0 |
| MDFLDL-TTL-450 | 450.0+/-14.0 |
| MDFLDL-TTL-500 | 500.0+/-15.0 |

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

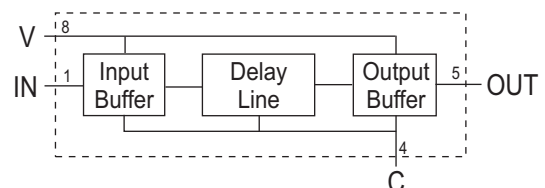
Operating Specifications:

All measurements made at 25 deg. C
All measurements made with $V_{CC} = +5VDC$
All measurements made with (1) FAST TTL output load

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

V_{CC} Supply Voltage: 4.75 to 5.25VDC
 V_{CC} Supply Current:
Constant "0" in = 40mA typical
Constant "1" in = 7mA typical
Logic "High" Input:
Voltage: 2.0VDC min. ; V_{CC} 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



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