

# Surface Mount Multiple FAST TTL Logic Delay Line

The Surface Mount multiple 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 SO-14 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.

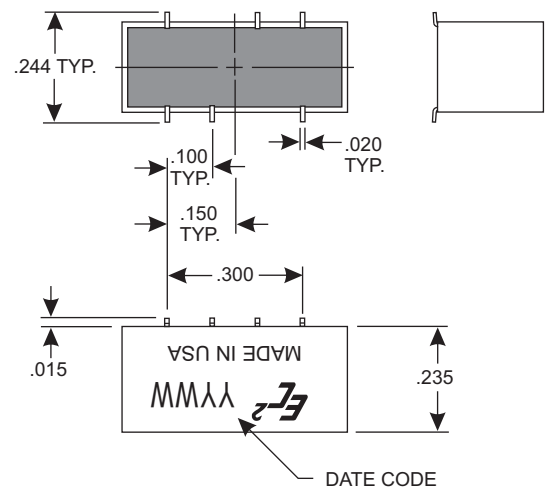
## Operating Specifications:

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 = 60mA 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.

## MECHANICAL DIAGRAM

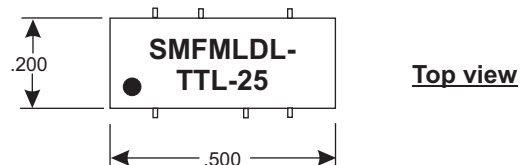


Product Selection Table

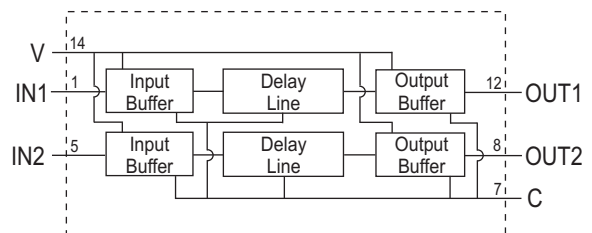
Part Number	Output Delay and Tolerance (in ns)
SMFMLDL-TTL-5	5.0+/-1.0
SMFMLDL-TTL-6	6.0+/-1.0
SMFMLDL-TTL-7	7.0+/-1.0
SMFMLDL-TTL-8	8.0+/-1.0
SMFMLDL-TTL-9	9.0+/-1.0
SMFMLDL-TTL-10	10.0+/-1.0
SMFMLDL-TTL-11	11.0+/-1.0
SMFMLDL-TTL-12	12.0+/-1.0
SMFMLDL-TTL-13	13.0+/-1.0
SMFMLDL-TTL-14	14.0+/-1.0
SMFMLDL-TTL-15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

Product Selection Table (Cont.)

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



## BLOCK DIAGRAM



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



**engineered components company**

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