

Surface Mount FAST TTL Logic Delay Line

The Surface Mount 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 6 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 4 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

Product Selection Table

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

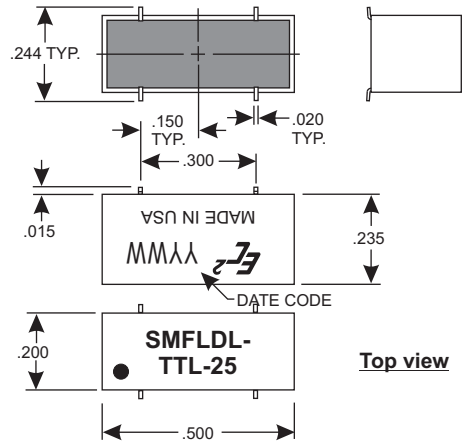
Part Number	Output Delay and Tolerance (in ns)
SMFLDL-TTL-5	5.0+/-1.0
SMFLDL-TTL-6	6.0+/-1.0
SMFLDL-TTL-7	7.0+/-1.0
SMFLDL-TTL-8	8.0+/-1.0
SMFLDL-TTL-9	9.0+/-1.0
SMFLDL-TTL-10	10.0+/-1.0
SMFLDL-TTL-11	11.0+/-1.0
SMFLDL-TTL-12	12.0+/-1.0
SMFLDL-TTL-13	13.0+/-1.0
SMFLDL-TTL-14	14.0+/-1.0
SMFLDL-TTL-15	15.0+/-1.0
SMFLDL-TTL-16	16.0+/-1.0
SMFLDL-TTL-17	17.0+/-1.0
SMFLDL-TTL-18	18.0+/-1.0
SMFLDL-TTL-19	19.0+/-1.0
SMFLDL-TTL-20	20.0+/-1.0
SMFLDL-TTL-21	21.0+/-1.0
SMFLDL-TTL-22	22.0+/-1.0
SMFLDL-TTL-23	23.0+/-1.0
SMFLDL-TTL-24	24.0+/-1.0
SMFLDL-TTL-25	25.0+/-1.0
SMFLDL-TTL-30	30.0+/-1.5
SMFLDL-TTL-35	35.0+/-1.5
SMFLDL-TTL-40	40.0+/-1.5
SMFLDL-TTL-45	45.0+/-2.0
SMFLDL-TTL-50	50.0+/-2.0
SMFLDL-TTL-55	55.0+/-2.0
SMFLDL-TTL-60	60.0+/-2.0
SMFLDL-TTL-65	65.0+/-2.5
SMFLDL-TTL-70	70.0+/-2.5
SMFLDL-TTL-75	75.0+/-2.5
SMFLDL-TTL-80	80.0+/-2.5
SMFLDL-TTL-85	85.0+/-3.0
SMFLDL-TTL-90	90.0+/-3.0
SMFLDL-TTL-95	95.0+/-3.0
SMFLDL-TTL-100	100.0+/-3.0
SMFLDL-TTL-110	110.0+/-3.5
SMFLDL-TTL-120	120.0+/-4.0

Product Selection Table (Cont.)

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

Part Number	Output Delay and Tolerance (in ns)
SMFLDL-TTL-130	130.0+/-4.0
SMFLDL-TTL-140	140.0+/-4.5
SMFLDL-TTL-150	150.0+/-4.5
SMFLDL-TTL-160	160.0+/-4.5
SMFLDL-TTL-170	170.0+/-5.0
SMFLDL-TTL-180	180.0+/-5.5
SMFLDL-TTL-190	190.0+/-6.0
SMFLDL-TTL-200	200.0+/-6.0
SMFLDL-TTL-210	210.0+/-6.5
SMFLDL-TTL-220	220.0+/-7.0
SMFLDL-TTL-230	230.0+/-7.5
SMFLDL-TTL-240	240.0+/-8.0
SMFLDL-TTL-250	250.0+/-8.0
SMFLDL-TTL-260	260.0+/-8.5
SMFLDL-TTL-270	270.0+/-9.0
SMFLDL-TTL-280	280.0+/-9.5
SMFLDL-TTL-290	290.0+/-10.0
SMFLDL-TTL-300	300.0+/-10.0
SMFLDL-TTL-310	310.0+/-10.0
SMFLDL-TTL-320	320.0+/-11.0
SMFLDL-TTL-330	330.0+/-11.0
SMFLDL-TTL-340	340.0+/-11.0
SMFLDL-TTL-350	350.0+/-11.0
SMFLDL-TTL-360	360.0+/-11.0
SMFLDL-TTL-370	370.0+/-12.0
SMFLDL-TTL-380	380.0+/-12.0
SMFLDL-TTL-390	390.0+/-12.0
SMFLDL-TTL-400	400.0+/-12.0
SMFLDL-TTL-410	410.0+/-13.0
SMFLDL-TTL-420	420.0+/-13.0
SMFLDL-TTL-430	430.0+/-13.0
SMFLDL-TTL-440	440.0+/-14.0
SMFLDL-TTL-450	450.0+/-14.0
SMFLDL-TTL-460	460.0+/-14.0
SMFLDL-TTL-470	470.0+/-15.0
SMFLDL-TTL-480	480.0+/-15.0
SMFLDL-TTL-490	490.0+/-15.0
SMFLDL-TTL-500	500.0+/-15.0

MECHANICAL DIAGRAM



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 = 40mA typical

Constant "1" in = 7mA typical

Logic "High" Input:

Voltage: 2.0VDC min. ; Vcc max.

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

Logic "Low" Input:

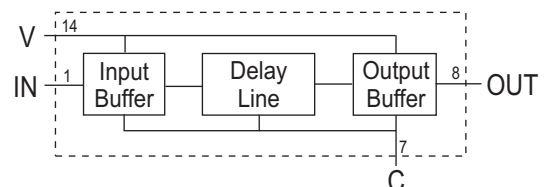
Voltage: 0.8 VDC max.

Current: -0.6mA max.

Logic "High" Voltage Out: 2.7VDC min.

Logic "Low" Voltage Out: 0.5VDC max.

BLOCK DIAGRAM



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



engineered components company

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