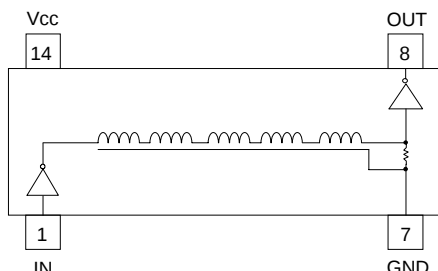


# FSDM Series FAST /TTL Buffered Single Output Delay Lines

- 14-Pin Package Commercial and Mil-Grade Versions
- FAST/TTL Logic Buffered
- Operating Temperature Ranges  
0°C to +70°C, or -55°C to +125°C
- 8-pin DIP/SMD Versions: FAMD L Series  
14-pin DIP/SMD Versions: FAIDL Series

FSDM 14-Pin Schematic



Electrical Specifications at 25°C

| Delay Tolerance (ns) | 14 Pin DIL TTL Buffered Triple Independent Delays |                       |
|----------------------|---------------------------------------------------|-----------------------|
|                      | Commercial Part Number                            | MIL-Grade Part Number |
| 5 ± 1.00             | FSDM-5                                            | FSDM3-5M              |
| 6 ± 1.00             | FSDM-6                                            | FSDM3-6M              |
| 7 ± 1.00             | FSDM-7                                            | FSDM3-7M              |
| 8 ± 1.00             | FSDM-8                                            | FSDM3-8M              |
| 9 ± 1.00             | FSDM-9                                            | FSDM3-9M              |
| 10 ± 1.50            | FSDM-10                                           | FSDM3-10M             |
| 15 ± 2.00            | FSDM-15                                           | FSDM3-15M             |
| 20 ± 2.00            | FSDM-20                                           | FSDM3-20M             |
| 25 ± 2.00            | FSDM-25                                           | FSDM3-25M             |
| 30 ± 2.00            | FSDM-30                                           | FSDM3-30M             |
| 35 ± 2.00            | FSDM-35                                           | FSDM3-35M             |
| 40 ± 2.00            | FSDM-40                                           | FSDM3-40M             |
| 50 ± 2.50            | FSDM-50                                           | FSDM3-50M             |
| 60 ± 3.00            | FSDM-60                                           | FSDM3-60M             |
| 70 ± 3.50            | FSDM-70                                           | FSDM3-70M             |
| 75 ± 3.75            | FSDM-75                                           | FSDM3-75M             |
| 80 ± 4.00            | FSDM-80                                           | FSDM3-80M             |
| 100 ± 5.0            | FSDM-100                                          | FSDM3-100M            |
| 125 ± 6.25           | FSDM-125                                          | FSDM3-125M            |
| 250 ± 12.5           | FSDM-250                                          | FSDM3-250M            |
| 500 ± 25.0           | FSDM-500                                          | FSDM3-500M            |
| 1000 ± 50.0          | FSDM-1000                                         | FSDM3-1000            |

## TEST CONDITIONS -- FAST / TTL

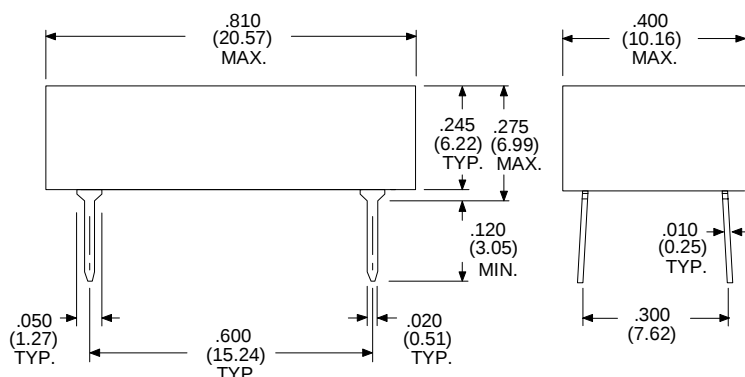
V<sub>CC</sub> Supply Voltage ..... 5.00VDC  
 Input Pulse Voltage ..... 3.20V  
 Input Pulse Rise Time ..... 3.0 ns max.  
 Input Pulse Width / Period ..... 1000 / 2000 ns  
 1. Measurements made at 25°C  
 2. Delay Times measured at 1.50V level of leading edge.  
 3. Rise Times measured from 0.75V to 2.40V.  
 4. 10pf probe and fixture load on output under test.

Dimensions in Inches (mm)

Commercial Grade 14-Pin Package with Unused Leads Removed as per Schematic. (For Mil-Grade FSDM3 the Height is 0.335")

## OPERATING SPECIFICATIONS

V<sub>CC</sub> Supply Voltage ..... 5.00 ± 0.25 VDC  
 I<sub>CC</sub> Supply Current ..... 25 mA typ, 48 mA max.  
 Logic "1" Input: V<sub>IH</sub> ..... 2.00 V min., 5.50 V max.  
 I<sub>IH</sub> ..... 20 µA max. @ 2.70V  
 Logic "0" Input: V<sub>IL</sub> ..... 0.80 V max.  
 I<sub>IL</sub> ..... -0.6 mA max.  
 V<sub>OH</sub> Logic "1" Voltage Out ..... 2.40 V min.  
 V<sub>OL</sub> Logic "0" Voltage Out ..... 0.50 V max.  
 P<sub>WI</sub> Input Pulse Width ..... 40% of Delay min.  
 Operating Temperature Range ..... 0° to 70°C  
 Storage Temperature Range ..... -65° to +150°C



## P/N Description

FSDM - XXX X

Buffered Triple Delays:

14-pin Com'l: FSDM

14-pin MIL: FSDM3

Total Delay in nanoseconds (ns)

Temp. Range Blank = Commercial

M = Mil-Grade

Examples: FSDM-25 = 25ns Delay  
74F, 14-Pin Thru-hole

FSDM3-50M = 50ns Delay  
74F, 14-Pin, Mil-Grade

**MIL-GRADE:** FSDM3 Military Grade delay lines use integrated circuits screened to MIL-STD-883B with an operating temperature range of -55 to +125°C. These devices have a package height of .335"

*Auto-Insertable DIP and Surface Mount Versions:  
 Refer to FAIDL Series, same 14-pin footprint.  
 For space saving, refer to FAMD L 8-pin Series*