FAST TTL Noise Filter Module

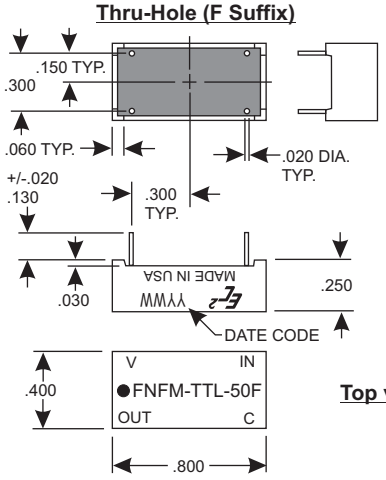
The FAST TTL Noise Filter Modules manufactured by Engineered Components Company are designed to filter or suppress input pulses below a specified suppress pulse width and to pass pulses above a specified pass pulse width. The operation of this module will eliminate unwanted shorter positive pulses from an input data stream and produce an output data stream consisting of only the longer positive pulses. The output of the module will remain "low" for any input pulse times shorter than the suppress time, and will change to a "high" for pulse times longer than the pass time.

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 3.5 million hours. The temperature coefficient of delay is less than 800 ppm/deg.C over the operating temperature range of 0 to +70 deg. C.

The module is provided in a 14-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.

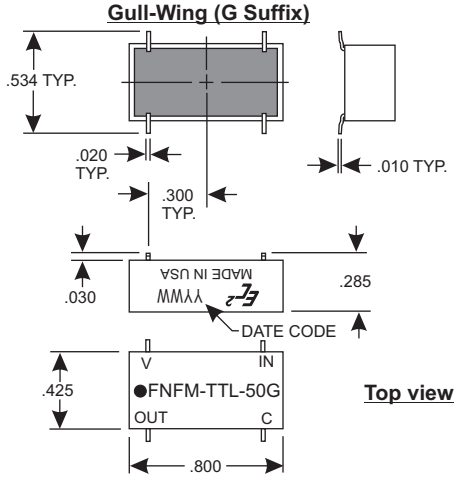
MECHANICAL DIAGRAM

Thru-Hole (F Suffix)



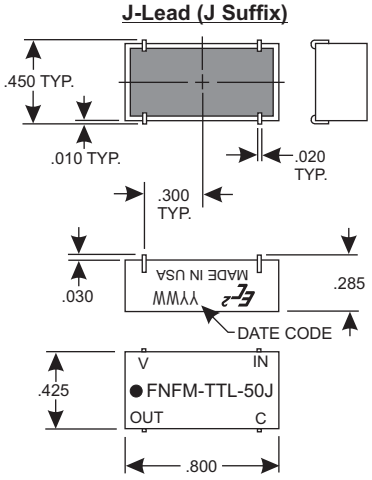
Top view

Gull-Wing (G Suffix)



Top view

J-Lead (J Suffix)



Product Selection Table

(Add F Suffix for Thru-Hole Leads, G Suffix for Gull-Wing Leads, or J Suffix for J-Leads)

Part Number	Nominal Pass/Suppress (ns)	Suppress Pulse Width (ns)	Pass Pulse Width (ns)
FNFM-TTL-5	5	</= 4.0	>/= 6.0
FNFM-TTL-10	10	</= 9.0	>/= 11.0
FNFM-TTL-15	15	</= 14.0	>/= 16.0
FNFM-TTL-20	20	</= 19.0	>/= 21.0
FNFM-TTL-25	25	</= 24.0	>/= 26.0
FNFM-TTL-30	30	</= 29.0	>/= 31.0
FNFM-TTL-35	35	</= 34.0	>/= 36.0
FNFM-TTL-40	40	</= 39.0	>/= 41.0
FNFM-TTL-45	45	</= 43.5	>/= 46.5
FNFM-TTL-50	50	</= 48.5	>/= 51.5
FNFM-TTL-60	60	</= 58.0	>/= 62.0
FNFM-TTL-70	70	</= 68.0	>/= 72.0
FNFM-TTL-75	75	</= 73.0	>/= 77.0
FNFM-TTL-80	80	</= 78.0	>/= 82.0
FNFM-TTL-90	90	</= 88.0	>/= 92.0
FNFM-TTL-100	100	</= 98.0	>/= 102.0
FNFM-TTL-125	125	</= 123.0	>/= 127.0
FNFM-TTL-150	150	</= 147.0	>/= 153.0
FNFM-TTL-175	175	</= 172.0	>/= 178.0
FNFM-TTL-200	200	</= 196.0	>/= 204.0
FNFM-TTL-250	250	</= 245.0	>/= 255.0
FNFM-TTL-300	300	</= 294.0	>/= 306.0
FNFM-TTL-400	400	</= 392.0	>/= 408.0
FNFM-TTL-500	500	</= 490.0	>/= 510.0

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

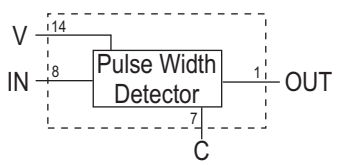
Operating Specifications:

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 "Low" in = 30mA typical
  Constant "High" 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



EC2 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