

FAST TTL Manchester Encoder Module

The FAST TTL Manchester Encoder Module manufactured by Engineered Components Company is designed to accept a TTL serial data input, and output the TTL Manchester code at the Manchester clock rate. The module requires a TTL clock input running at the same bit rate as the Manchester clock rate. The encoder module will operate at clock frequencies up to 30 MHz. To ensure accurate encoding, the data bits arriving at the encoder must be valid at least 3ns prior to the arrival of the clock rising edge and remain valid until after the clock falling edge has occurred.

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 2.5 million hours. These modules will decode input frequency errors of +/- 5% with no significant effect on the output error rate.

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 5 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 Vcc = +5VDC
 All measurements made with (1) FAST TTL output load
 All measurements made with a data and clock rate of 20MHz

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: 50mA typical
 Logic "High" Input:
 Voltage: 2.0VDC min.; Vcc max.
 Current: 2.7VDC = 20uA max.; 5.5VDC = 1mA max.

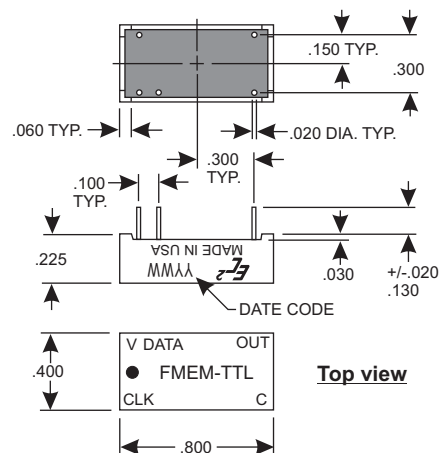
Logic "Low" Input:
 Voltage: 0.8 VDC max.
 Current: -0.6mA max.

Logic "High" Voltage Out: 2.7VDC min.
 Logic "Low" Voltage Out: 0.5VDC max.

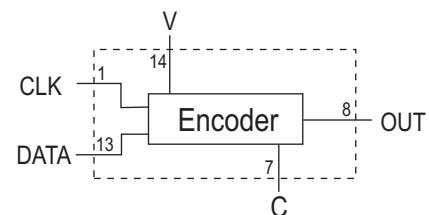
Product Selection Table

Part Number	Encoding Frequency (Mhz)
FMEM-TTL	2.0 - 30.0

MECHANICAL DIAGRAM



BLOCK DIAGRAM



engineered components company

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