

Product Overview

MC100E016: ECL 8-Bit Up Synchronous Binary Counter

For complete documentation, see the data sheet.

The MC10E/100E016 is a high-speed synchronous, presettable, cascadable 8-bit binary counter. Architecture and operation are the same as the MC10H016 in the MECL 10H family, extended to 8-bits, as shown in the logic symbol. The counter features internal feedback of TCbar, gated by the TCLD (terminal count load) pin. When TCLD is LOW (or left open, in which case it is pulled LOW by the internal pull-downs), the TCbar feedback is disabled, and counting proceeds continuously, with TCbar going LOW to indicate an all-one state. When TCLD is HIGH, the TC feedback causes the counter to automatically reload upon TCbar = LOW, thus functioning as a programmable counter. The Qn outputs do not need to be terminated for the count function to operate properly. To minimize noise and power, unused Q outputs should be left unterminated. The 100 series contains temperature compensation.

Features

- 700MHz Min. Count Frequency
- 1000ps CLK to Q, TCbar
- Internal TCbar Feedback (Gated)
- 8-Bit
- Fully Synchronous Counting and TCbar Generation
- Asynchronous Master Reset
- PECL Mode Operating Range: VCC= 4.2 V to 5.7 V with VEE = 0 V
- NECL Mode Operating Range: VCC= 0 V with VEE = -4.2 V to -5.7 V
- Internal Input Pulldown Resistors
- ESD Protection: > 2 kV HBM, > 200 V MM

For more features, see the data sheet

Part Electrical Specifications

Product	Compliance	Status	Type	Input Level	Output Level	V _{CC} Typ (V)	f _{Max} Typ (MHz)	t _{pd} Typ (ns)	t _r & t _f Max (ps)	Package Type
MC100E016FNR2G	Pb-free Halide free	Active	Counter	ECL	ECL	5	900	0.725	700	PLCC-28

For more information please contact your local sales support at www.onsemi.com.

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