

Product Overview

MC100LVEL51: ECL Differential Clock D Flip-Flop

For complete documentation, see the data sheet.

The MC100LVEL51 is a differential clock D flip-flop with reset. The device is functionally equivalent to the EL51 device, but operates from a 3.3V supply. With propagation delays and output transition times essentially equal to the EL51, the LVEL51 is ideally suited for those applications which require the ultimate in AC performance at 3.3V VCC. The reset input is an asynchronous, level triggered signal. Data enters the master portion of the flip-flop when the clock is LOW and is transferred to the slave, and thus the outputs, upon a positive transition of the clock. The differential clock inputs of the LVEL51 allow the device to be used as a negative edge triggered flip-flop. The differential input employs clamp circuitry to maintain stability under open input conditions. When left open, the CLK input will be pulled down to VEE and the CLKbar input will be biased at VCC/2.

Features

- 475ps Propagation Delay
 - 2.8GHz Toggle Frequency
 - ESD Protection: >4 KV HBM, >200 V MM
 - The 100 Series Contains Temperature Compensation
 - PECL Mode Operating Range: VCC= 3.0 V to 3.8 V with VEE= 0 V
 - NECL Mode Operating Range: VCC= 0 V with VEE= -3.0 V to -3.8 V
 - Internal Input Pulldown Resistors
 - Meets or Exceeds JEDEC Spec EIA/JESD78 IC Latchup Test
 - Moisture Sensitivity Level 1 For Additional Information, see Application Note AND8003/D
 - Flammability Rating: UL-94 code V-0 @ 1/8", Oxygen Index 28 to 34
- For more features, see the data sheet

Applications

- 2.8GHz Toggle Frequency

Part Electrical Specifications

Product	Compliance	Status	Type	Bits	Input Level	Output Level	V _{CC} Typ (V)	t _{jitter} Typ (ps)	t _{pd} Typ (ns)	t _{su} Min (ns)	t _h Min (ns)	t _{rec} Typ (ns)	t _R & t _F Max (ps)	f _{Toggle} Typ (MHz)	Package Type
MC100LVEL51DG	Pb-free Halide free	Active	D-Type	1	ECL	ECL	3.3	1	0.475	0.15	0.2	0.2	320	2800	SOIC-8
MC100LVEL51DTR2G	Pb-free Halide free	Active	D-Type	1	ECL	ECL	3.3	1	0.475	0.15	0.2	0.2	320	2800	TSSOP-8

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

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