Product Overview

MC100EL52: ECL Differential Clock/Data D Flip-Flop

For complete documentation, see the data sheet.

The MC10EL/100EL52 is a differential data, differential clock D flip-flop with reset. The device is functionally equivalent to the E452 device with higher performance capabilities. With propagation delays and output transition times significantly faster than the E452 the EL52 is ideally suited for those applications which require the ultimate in AC performance. 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 EL52 allow the device to also be used as a negative edge triggered device. The EL52 employs input clamping circuitry so that under open input conditions (pulled down to VEE) the outputs of the device will remain stable.The 100 Series contains temperature compensation.

Features

- 365ps Propagation Delay
- 2.0GHz Toggle Frequency
- ESD Protection: > 1 KV HBM, > 100 V MM
- 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 on D and CLK
- Meets or Exceeds JEDEC Spec EIA/JESD78 IC Latchup Test
- Moisture Sensitivity Level 1For Additional Information, see Application Note AND8003/D
- Flammability Rating: UL-94 code V-0 @ 1/8", Oxygen Index 28 to 34
- Transistor Count = 48 devices

  For more features, see the data sheet

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
MC100EL52DG	Pb-free Halide free	Active	D-Type	1	ECL	ECL	5	1	0.365	0.125	0.15		350	2800	SOIC-8

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

Created on: 7/22/2019