Product Overview

MC100EP29: ECL Dual Differential Clock/Data D Flip-Flop With Set and Reset

For complete documentation, see the data sheet.

The MC10/100EP29 is a dual master-slave flip flop. The device features fully differential Data and Clock inputs as well as outputs. The MC10/100EP29 is functionally equivalent to the MC10/100EL29. Data enters the master latch when the clock is LOW and transfers to the slave upon a positive transition on the clock input.The differential inputs have special circuitry which ensures device stability under open input conditions. When both differential inputs are left open the Dbar input will pull down to VEE and the Dbar input will bias around VCC/2. The outputs will go to a defined state, however the state will be random based on how the flip flop powers up.Both flip flops feature asynchronous, overriding Set and Reset inputs. Note that the Set and Reset inputs cannot both be HIGH simultaneously.The VBB pin, an internally generated voltage supply, is available to this device only. For single-ended input conditions, the unused differential input is connected to VBB as a switching reference voltage. VBB may also rebias AC coupled inputs. When used, decouple VBB and VCC via a 0.01uF capacitor and limit current sourcing or sinking to 0.5 mA. When not used, VBB should be left open.The 100 Series Contains Temperature Compensation

Features

- Maximum Frequency > 3 GHz Typical
- 500 ps Typical Propagation Delays
- PECL Mode Operating Range: VCC = 3.0 V to 5.5 V with VEE = 0 V
- NECL Mode Operating Range: VCC = 0 V with VEE = -3.0 V to -5.5 V
- Open Input Default State
- Safety Clamp on Inputs
- These are Pb−Free Devices

Applications

- Functionally equivalent to the MC10/100EL29

Part Electrical Specifications

Product	Pricing ($/Unit)	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
MC100EP29DTG		Pb-free Halide free	Active	D-Type	2	ECL CML	ECL	3.3 5	0.2	0.42	0.1	0.1	0.08	250	3000	TSSOP-20
MC100EP29DTR2G		Pb-free Halide free	Active	D-Type	2	ECL CML	ECL	3.3 5	0.2	0.42	0.1	0.1	0.08	250	3000	TSSOP-20
MC100EP29MNG		Pb-free Halide free	Active	D-Type	2	ECL CML	ECL	5 3.3	0.2	0.42	0.1	0.1	0.08	250	3000	QFN-20

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

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