

Product Overview

MC100E116: ECL Quint Differential Line Receiver

For complete documentation, see the data sheet.

The MC10E/100E116 is a quint differential line receiver with emitter-follower outputs. For applications which require bandwidths greater than that of the E116, the E416 device may be of interest. Active current sources plus a deep collector feature of the MOSAIC III process provide the receivers with excellent common-mode noise rejection. Each receiver has a dedicated VCCO supply lead, providing optimum symmetry and stability. If both inverting and non-inverting inputs are at an equal potential of > -2.5 V, the receiver does not go to a defined state, but rather current-shares in normal differential amplifier fashion, producing output voltage levels midway between HIGH and LOW, or the device may even oscillate. 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 0.01 F 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

- 500ps Max. Propagation Delay
- VBB Supply Output
- Dedicated VCCO Pin for Each Receiver
- 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
- Output Qs will default low when inputs are $< VCC - 2.5$ V
- Internal Input Pulldown Resistors
- Meets or Exceeds JEDEC Spec EIA/JESD78 IC Latchup Test
- ESD Protection: > 2 KV HBM, > 200 V MM
- Moisture Sensitivity Level 1 For Additional Information, see Application Note AND8003/D

For more features, see the data sheet

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V _{CC} Typ (V)	t _{jitter} MS Typ (ps)	t _{skew(0-1)} Max (ps)	t _{pd} Typ (ns)	t _R & t _F Max (ps)	f _{max} Clock Typ (MHz)	f _{max} Data Typ (Mbps)	Package Type
MC100E116FNG		Pb-free Halide free	Active	Signal Driver	5	1:1	ECL	ECL	5	< 1	50	0.3	625	800		PLC C-28
MC100E116FNR2G		Pb-free Halide free	Active	Signal Driver	5	1:1	ECL	ECL	5	< 1	50	0.3	625	800		PLC C-28

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

Created on: 6/4/2020