Product Overview

MC10EP17: Quad Differential Driver/Receiver

For complete documentation, see the data sheet.

The MC10/100EP17 is a 4-bit differential line receiver based on the EP16 device. The >3.0 GHz maximum frequency provided by the high frequency outputs makes the device ideal for buffering of very high speed oscillators. 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 design incorporates two stages of gain, internal to the device, making it an excellent choice for use in high bandwidth amplifier applications. Inputs of unused gates can be left open and will not affect the operation of the rest of the device. All VCC and VEE pins must be externally connected to power supply to guarantee proper operation. The 100 Series contains temperature compensation.

Features

- 220ps Typical Propagation Delay
- Maximum Frequency >3.0 GHz Typical
- 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
- Q Output Will Default LOW with Inputs Open or at VEE
- VBB Output
- Pb-Free Packages are Available

Applications

- Ideal for buffering high speed oscillators

Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V_{CC} Typ (V)	$t_{JitterRMS}$ Typ (ps)	$t_{skew(o-o)}$ Max (ps)	t_{pd} Typ (ns)	t_R & t_F Max (ps)	f_{max} Clock Typ (MHz)	f_{max} Data Typ (Mbps)	Package Type
MC10EP17DTG	Pb-free Halide free	Active	Signal Driver	4	1:1	CML ECL	ECL	3.3 5	0.147		0.22	220	3000		TSSOP-20

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