

## Product Overview

### MC10LVEP16: Differential Driver / Receiver

For complete documentation, see the data sheet.

The MC10LVEP16 is a world-class differential receiver/driver. The device is functionally equivalent to the EL16, EP16 and LVEL16 devices. With output transition times significantly faster than the EL16 and LVEL16, the LVEP16 is ideally suited for interfacing with high frequency and low voltage (2.5 V) sources. Single ended input operation is limited to a  $V_{CC} \geq 3.0$  V in PECL mode, or VEE. 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 uF 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

- 240 ps Propagation Delay
- Maximum Frequency > 4 GHz Typical
- PECL Mode Operating Range:  $V_{CC} = 2.375$  V to 3.8 V with  $V_{EE} = 0$  V
- NECL Mode Operating Range:  $V_{CC} = 0$  V with  $V_{EE} = -2.375$  V to -3.8 V
- VBB Output
- Open Input Default State
- LVDS Input Compatible

### Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	$V_{CC}$ Typ (V)	$t_{jitter}^{RMS}$ Typ (ps)	$t_{skew}^{(o)}$ Max (ps)	$t_{pd}$ Typ (ns)	$t_R$ & $t_F$ Max (ps)	$f_{max}^{Clock}$ Typ (MHz)	$f_{max}^{Data}$ Typ (Mbps)	Package Type
MC10LVEP16DTR2G	Pb-free Halide free	Active	Signal Driver	1	1:1	CML ECL LVDS	ECL	2.5 3.3	0.147	20	0.24	170	4000		TSSOP-8

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