

Product Overview

MC10EP16: Differential Driver / Receiver

For complete documentation, see the data sheet.

The EP16 is a world-class differential receiver/driver. The device is functionally equivalent to the EL16 and LVEL16 devices with higher performance capabilities. With output transition times significantly faster than the EL16 and LVEL16, the EP16 is ideally suited for interfacing with high frequency sources. 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 μ F capacitor and limit current sourcing or sinking to 0.5 mA. When not used, VBB should be left open. Under open input conditions (pulled to VEE) internal input clamps will force the Q output LOW. The 100 Series contains temperature compensation.

Features

- 220ps Propagation Delay
- Maximum Frequency > 4 GHz Typical (See Graph)
- 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

- ATE Automatic Test Equipment

Part Electrical Specifications

| Product | Compliance | Status | Type | Channels | Input / Output Ratio | Input Level | Output Level | V _{CC} Typ (V) | t _{Jitter} MS Typ (ps) | t _{skew(o-g)} Max (ps) | t _{pd} Typ (ns) | t _R & t _F Max (ps) | f _{max,Clock} Typ (MHz) | f _{max,Data} Typ (Mbps) | Package Type |
|---------------|------------------------|--------|---------------|----------|----------------------|-------------|--------------|-------------------------|---------------------------------|---------------------------------|--------------------------|--|----------------------------------|----------------------------------|--------------|
| MC10EP16DG | Pb-free Halide free | Active | Signal Driver | 1 | 1:1 | ECL CML | ECL | 3.3 5 | 0.2 | 20 | 0.22 | 170 | 4000 | | SOIC-8 |
| MC10EP16DTG | Pb-free Halide free | Active | Signal Driver | 1 | 1:1 | CML ECL | ECL | 3.3 5 | 0.2 | 20 | 0.22 | 170 | 4000 | | TSSOP-8 |
| MC10EP16DTR2G | Pb-free Halide free | Active | Signal Driver | 1 | 1:1 | CML ECL | ECL | 5 3.3 | 0.2 | 20 | 0.22 | 170 | 4000 | | TSSOP-8 |

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

Created on: 8/22/2019