Product Overview

MC100EP16VA: Differential Driver / Receiver with High Gain

For complete documentation, see the data sheet.

The EP16VA is a world-class differential receiver/driver. The device is functionally equivalent to the EP16 and LVEP16 devices but with high gain output. QHG and QHGbar outputs have a DC gain several times larger than the DC gain of an EP16.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 µF 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 QHG output LOW.Special considerations are required for differential inputs under No Signal conditions to prevent instability.The 100 Series contains temperature compensation.

Features

- 270 ps Typical Propagation Delay
- Gain > 20
- 20 mV Minimum Input Voltage Swing
- Maximum Frequency > 3 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
- VBB Output

Applications

- Functionally equivalent to the EP16 and LVEP16 devices

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V_{CC} Typ (V)	t_{Jitter} RMS 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
MC100EP16VADG		Pb-free / Halide free	Active	Signal Driver	1	1:1	CML / ECL	ECL	5 / 3.3	0.2	20	0.27	170	3000		SOIC-8
MC100EP16VADTG		Pb-free / Halide free	Active	Signal Driver	1	1:1	CML / ECL	ECL	3.3 / 5	0.2	20	0.27	170	3000		TSSOP-8
MC100EP16VADTR2G		Pb-free / Halide free	Active	Signal Driver	1	1:1	CML / ECL	ECL	3.3 / 5	0.2	20	0.27	170	3000		TSSOP-8

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

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