

Product Overview

MC100EP446: Serial to Parallel Converter, 3.3 V / 5 V, 8-Bit, CMOS / ECL / TTL Data Input

For complete documentation, see the data sheet.

The MC10/100EP446 is an integrated 8-bit parallel to serial data converter. The device is designed with unique circuit topology to operate for NRZ data rates up to 3.2 Gb/s. The conversion sequence from parallel data into a serial data stream is from bit D0 to D7. The parallel input pins D0-D7 are configurable to be threshold controlled by CMOS, ECL, or TTL level signals. The serial data rate output can be selected at internal clock data rate or twice the internal data rate using the CKSEL pin. Control pins are provided to reset (SYNC) and disable internal clock circuitry (CKEN). In either CKSEL modes, the internal flip-flops are triggered on the rising edge for CLK and the multiplexers are switched on the falling edge of CLK, therefore, all associated specification limits are referenced to the negative edge of the clock input. Additionally, VBB pin is provided for single-ended input condition. The 100 Series devices contain temperature compensation network.

Features

- 3.2 Gb/s Typical Data Rate Capability
- Differential Clock and Serial Inputs
- VBB Output for Single-ended Input Applications
- Asynchronous Data Reset (SYNC)
- 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
- Parallel Interface Can Support PECL, TTL and CMOS
- Pb-Free Packages are Available

For more features, see the data sheet

Applications

- Parallel to Serial Conversion

Part Electrical Specifications

Product	Compliance	Status	Type	Bits	Input Level	Output Level	V _{CC} Typ (V)	f _{dr} Typ (Gb/sec)	t _{pd} Typ (ns)	t _{su} Min (ns)	t _h Min (ns)	t _{jitter} Typ (ps)	t _r & t _f Max (ps)	Package Type
MC100EP446FAG	Pb-free	Active	Parallel/Serial	8	CML	ECL	5	3.4	0.8	-0.45	-0.6	0.2	150	LQFP-32
	Halide free				ECL	3.3								
MC100EP446MNG	Pb-free	Active	Parallel/Serial	8	ECL	ECL	5	3.4	0.8	-0.45	-0.6	0.2	150	QFN-32
	Halide free				CML	3.3								

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

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