



MC100EPT23

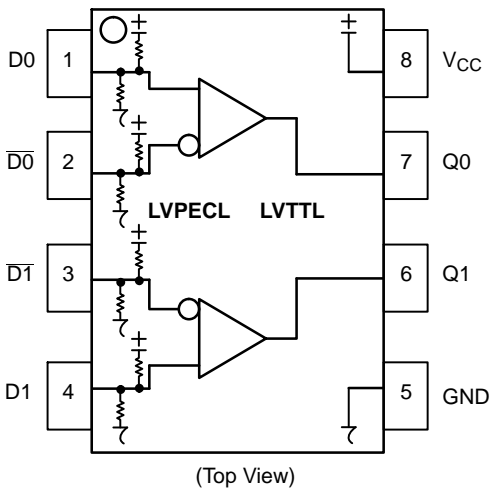


Figure 1. Logic Diagram and 8-Lead Pinout

Table 1. PIN DESCRIPTION

Pin	Function
Q0, Q1	LVTTTL/LVCMOS Outputs
D0**, D1** D0-bar**, D1-bar**	Differential LVPECL/LVDS/CML Inputs
V _{CC}	Positive Supply
GND	Ground
EP	(DFN-8 only) Thermal exposed pad must be connected to a sufficient thermal conduit. Electrically connect to the most negative supply (GND) or leave unconnected, floating open.

** Pins will default to $V_{CC}/2$ when left open.

Table 2. ATTRIBUTES

Characteristics	Value
Internal Input Pulldown Resistor	50 kΩ
Internal Input Pullup Resistor	50 kΩ
ESD Protection	
Human Body Model	> 1500 V
Machine Model	> 100 V
Charged Device Model	> 2 kV

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Table 3. MAXIMUM RATINGS

Symbol	Parameter	Condition 1	Condition 2	Rating	Unit
V_{CC}	Power Supply	GND = 0 V		3.8	V
V_I	Input Voltage	GND = 0 V	$V_I \leq V_{CC}$	3.8	V
I_{out}					

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Table 4. PECL DC CHARACTERISTICS ($V_{CC} = 3.3\text{ V}$, $GND = 0\text{ V}$ (Note 2))

Symbol	Characteristic	-40 C			25 C			85 C			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
I_{CCH}	Power Supply Current (Outputs set to HIGH)	10	20	35	10	20	35	10	20	35	mA
I_{CCL}	Power Supply Current (Outputs set to LOW)	15	27	40	15	27	40	15	27	40	mA
V_{IH}	Input HIGH Voltage	2075		2420	2075		2420	2075		2420	mV
V_{IL}	Input LOW Voltage	1355		1675	1355		1675	1355		1675	mV
V_{IHCMR}	Input HIGH Voltage Common Mode Range (Note 3)	1.2		3.3	1.2		3.3	1.2		3.3	V
I_{IH}	Input HIGH Current			150			150			150	μA
I_{IL}	Input LOW Current D \bar{D}	-150 -150			-150 -150			-150 -150		0.5	μA

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Resource Reference of Application Notes

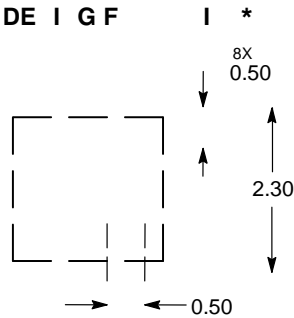
- AN1405/D** – ECL Clock Distribution Techniques
- AN1406/D** – Designing with PECL (ECL at +5.0 V)
- AN1503/D** – ECLinPS™ I/O SPiCE Modeling Kit
- AN1504/D** – Metastability and the ECLinPS Family
- AN1568/D** – Interfacing Between LVDS and ECL
- AN1672/D** – The ECL Translator Guide
- AND8001/D** – Odd Number Counters Design
- AND8002/D** – Marking and Date Codes
- AND8020/D** – Termination of ECL Logic Devices
- AND8066/D** – Interfacing with ECLinPS
- AND8090/D** – AC Characteristics of ECL Devices

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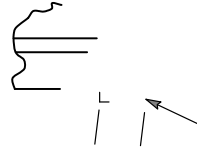
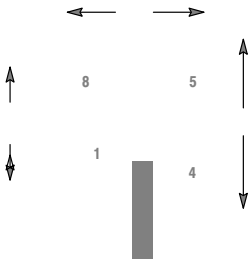


DIMENSIONS: MILLIMETERS

*For additional information on our Pb-Free strategy and soldering details, please download the [Soldering and Mounting Techniques Reference Manual, SOLDERRM/D](#).

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