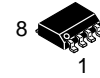


3.3 ECL -F
D o

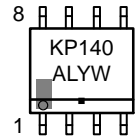
MC100E 140

Description



**SOIC-8
D SUFFIX
CASE 751**

**MARKING
DIAGRAM**



- A = Assembly Location
- L = Wafer Lot
- Y = Year
- W = Work Week
- = Pb-Free Package

ORDERING INFORMATION

See detailed ordering and shipping information in the package dimensions section on page 5 of this data sheet.

Features

-
-
-
-
-
-
-
-
-
-
-

MC100EP140

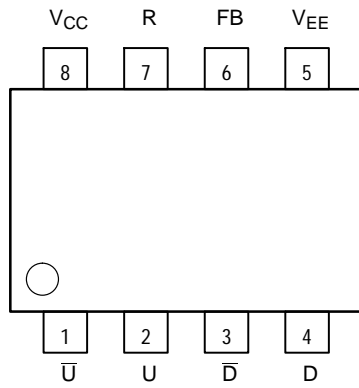


Figure 1. 8-Lead Pinout (Top View)

Table 1. PIN DESCRIPTION

PIN	FUNCTION
D, \bar{D}	Differential Down Outputs
U, \bar{U}	Differential Up Outputs
R*	ECL Reference Input
FB*	ECL Feedback Input
V _{CC}	Positive Supply
V _{EE}	Negative Supply

Table 2. STATE TABLE

PHASE DETECTOR STATE

Figure 2. Phase Detector Logic Model

MC100EP140

Table 3. ATTRIBUTES

Characteristics	Value
Internal Input Pulldown Resistor	75 k

MC100EP140

Table 6. 100EP DC CHARACTERISTICS, NECL $V_{CC} = 0\text{ V}$, $V_{EE} = -3.6\text{ V to } -3.0\text{ V}$ (Note 4)

Symbol	Characteristic	-40°C			25°C			85°C			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
I_{EE}	Power Supply Current	45	65	85	50	70	90	53	73	93	mA
V_{OH}	Output HIGH Voltage (Note 5)	-1075	-950	-825	-1025	-900	-775	-1000	-875	-750	mV
V_{OL}	Output LOW Voltage (Note 5)	-1525	-1400	-1275	-1500	-1375	-1250	-1475	-1350	-1225	mV
V_{IH}	Input HIGH Voltage (Single-Ended)	-1225		-880	-1225		-880	-1225		-880	mV
V_{IL}	Input LOW Voltage (Single-Ended)	-1945		-1625	-1945		-1625	-1945		-1625	mV
I_{IH}	Input HIGH Current			150			150			150	

I

MC100EP140

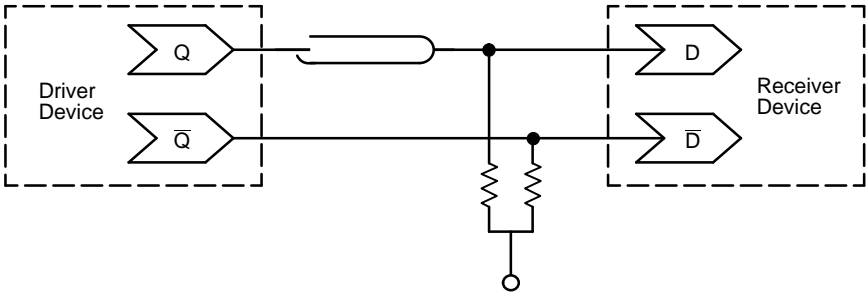
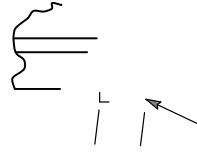
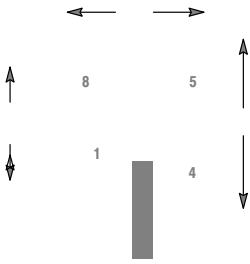


Figure 5. Typical Termination for Output Driver and Device Evaluation
(See Application Note AND8020/D – Termination of ECL Logic Devices.)

SOIC 8 NB
CASE 751-07
ISSUE AK

DATE 16 FEB 2011



SEATING
PLANE



onsemi, **onsemi**, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "**onsemi**" or its affiliates and/or subsidiaries in the United States and/or other countries. **onsemi** owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of **onsemi**'s product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. **onsemi** reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and **onsemi** makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using **onsemi**
