

3.3 V ECL 2-Input Differential AND/NAND

MC100LVEL05

Description

The MC100LVEL05 is a 2-input differential AND/NAND gate. The device is functionally equivalent to the MC100EL05 device and operates from a 3.3 V supply voltage. With propagation delays and output transition times equivalent to the EL05, the LVEL05 is ideally suited for those applications which require the ultimate in AC performance at low voltage power supplies.

Because a negative 2-input NAND is equivalent to a 2-input OR function, the differential inputs and outputs of the device allows the LVEL05 to also be used as a 2-input differential OR/NOR gate.

Features

340 ps Propagation Delay

High Bandwidth Output Transitions

ESD Protection:

> 4 kV Human Body Mode

> 200 V Machine Model

The 100 Series Contains Temperature Compensation

PECL Mode Operating Range: $V_{CC} = 3.0\text{ V to } 3.8\text{ V}$
 with $V_{EE} = 0\text{ V}$

NECL Mode Operating Range: $V_{CC} = 0\text{ V}$
 with $V_{EE} = 3.0\text{ V to } 3.8\text{ V}$

Internal Input Pulldown Resistors

Q Output will Default LOW with All Inputs Open or at V_{EE}

Meets or Exceeds JEDEC Spec EIA/JESD78 IC Latchup Test

Moisture Sensitivity

Level 1 for SOIC 8

Level 3 for TSSOP 8

For Additional Information, see Application Note [AND8003/D](#)

Flammability Rating: UL 94 V 0 @ 0.125 in,

Oxygen Index: 28 to 34

Transistor Count = 69 Devices

These Devices are Pb-Free, Halogen Free and are RoHS Compliant

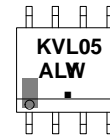


SOIC-8
 D SUFFIX
 CASE 751



TSSOP-8
 DT SUFFIX
 CASE 948R

MARKING DIAGRAMS



SOIC-8



TSSOP-8

ORDERING INFORMATION

Device	Package	Shipping
	-	
	-	
	-	

MC100LVEL05

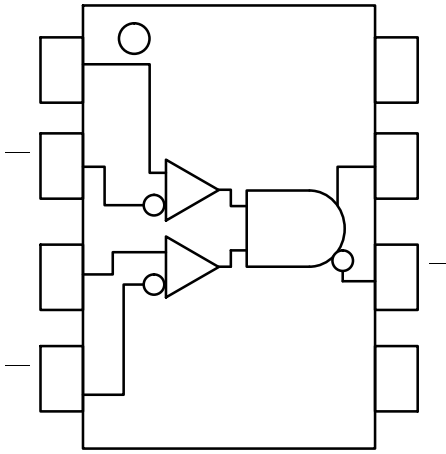


Figure 1. Logic Diagram and Pinout Assignment

Table 1. PIN DESCRIPTION

PIN	FUNCTION
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Table 2. MAXIMUM RATINGS

MC100LVEL05

Table 3. LVPECL DC CHARACTERISTICS

Symbol	Characteristic	-40 C		25 C	85 C	
		Min	Typ			

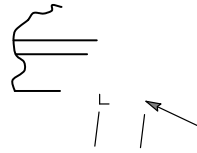
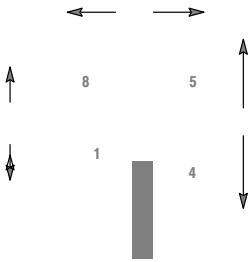
MC100LEVEL05

Table 5. AC CHARACTERISTICS

Symbol	Characteristic	-40°C			25 C			85 C			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	

SOIC 8 NB
CASE 751-07
ISSUE AK

DATE 16 FEB 2011



SEATING
PLANE



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