

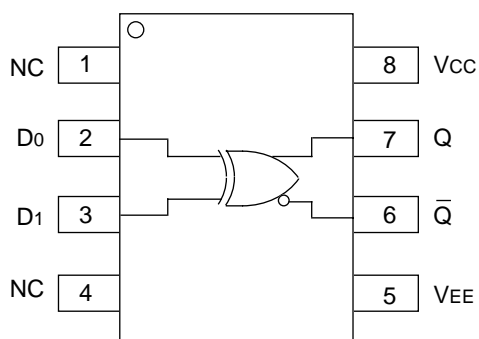
## FEATURES

- 260ps propagation delay
- High bandwidth output transitions
- Internal 75K $\Omega$  input pull-down resistors
- Available in 8-pin SOIC package

## DESCRIPTION

The SY10/100EL07 are 2-input XOR/XNOR gates. These devices are functionally equivalent to the E107 devices, with higher performance capabilities. With propagation delays and output transition times significantly faster than the E107, the EL07 is ideally suited for those applications which require the ultimate in AC performance.

## PIN CONFIGURATION/BLOCK DIAGRAM



**SOIC  
TOP VIEW**

## PIN NAMES

Pin	Function
D0, D1	Data Inputs
Q	Data Outputs

**DC ELECTRICAL CHARACTERISTICS**V<sub>EE</sub> = V<sub>EE</sub> (Min.) to V<sub>EE</sub> (Max.); V<sub>CC</sub> = GND

Symbol	Parameter	T <sub>A</sub> = -40°C			T <sub>A</sub> = 0°C			T <sub>A</sub> = +25°C			T <sub>A</sub> = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I <sub>EE</sub>	Power Supply Current													mA
	10EL	—	14	17	11	14	17	11	14	17	11	14	17	
	100EL	—	14	17	11	14	17	11	14	17	13	16	20	
V <sub>EE</sub>	Power Supply Voltage													V
	10EL	-4.75	-5.2	-5.5	-4.75	-5.2	-5.5	-4.75	-5.2	-5.5	-4.75	-5.2	-5.5	
	100EL	-4.20	-4.5	-5.5	-4.20	-4.5	-5.5	-4.20	-4.5	-5.5	-4.20	-4.5	-5.5	
I <sub>IH</sub>	Input HIGH Current													μA
	D <sub>0</sub>	—	—	250	—	—	250	—	—	250	—	—	250	
	D <sub>1</sub>	—	—	150	—	—	150	—	—	150	—	—	150	

**AC ELECTRICAL CHARACTERISTICS**V<sub>EE</sub> = V<sub>EE</sub> (Min.) to V<sub>EE</sub> (Max.); V<sub>CC</sub> = GND

Symbol	Parameter	T <sub>A</sub> = -40°C			T <sub>A</sub> = 0°C			T <sub>A</sub> = +25°C			T <sub>A</sub> = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay to Output D	90	250	435	140	250	385	150	260	395	170	280	415	ps
t <sub>r</sub> t <sub>f</sub>	Output Rise/Fall Times Q (20% to 80%)	100	225	350	100	225	350	100	225	350	100	225	350	ps

**PRODUCT ORDERING CODE**

Ordering Code	Package Type	Operating Range	Marking Code
SY10EL07ZC	Z8-1	Commercial	HEL07
SY10EL07ZCTR*	Z8-1	Commercial	HEL07
SY100EL07ZC	Z8-1	Commercial	XEL07
SY100EL07ZCTR*	Z8-1	Commercial	XEL07

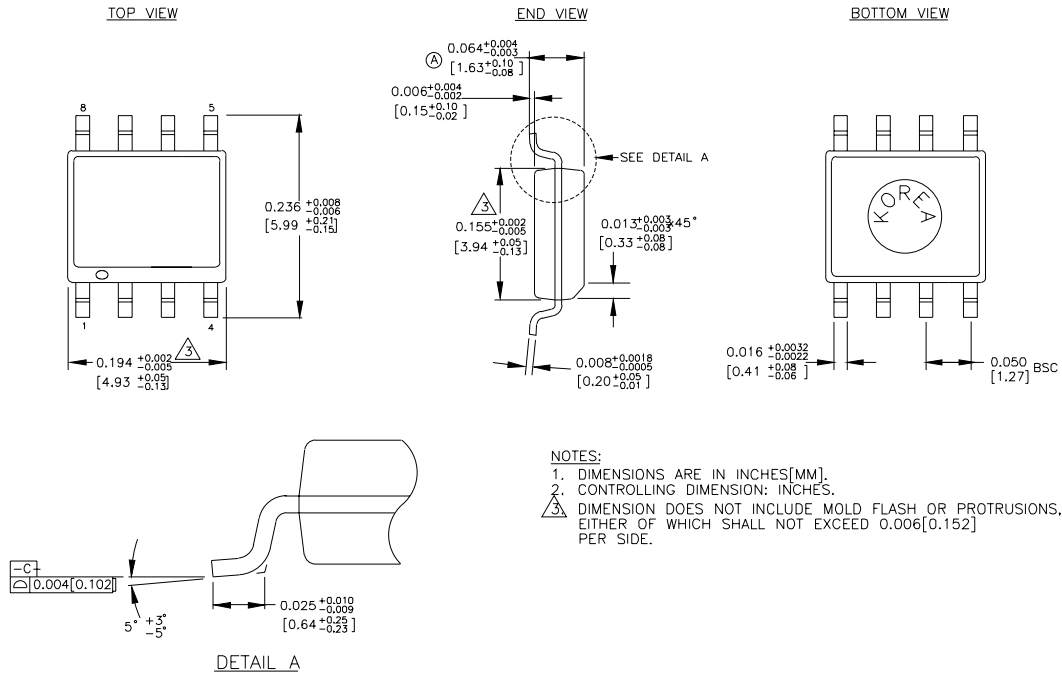
\*Tape and Reel

**Note 1.** Recommended for new designs.

Ordering Code	Package Type	Operating Range	Marking Code
SY10EL07ZI <sup>(1)</sup>	Z8-1	Industrial	HEL07
SY10EL07ZITR* <sup>(1)</sup>	Z8-1	Industrial	HEL07
SY100EL07ZI <sup>(1)</sup>	Z8-1	Industrial	XEL07
SY100EL07ZITR* <sup>(1)</sup>	Z8-1	Industrial	XEL07

\*Tape and Reel

## 8 LEAD SOIC .150" WIDE (Z8-1)



Rev. 03

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**MICREL, INC. 1849 FORTUNE DRIVE SAN JOSE, CA 95131 USA**TEL + 1 (408) 944-0800 FAX + 1 (408) 944-0970 WEB <http://www.micrel.com>

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