



## 2-INPUT XOR/XNOR

**SY10EL07**  
**SY100EL07**

### FEATURES

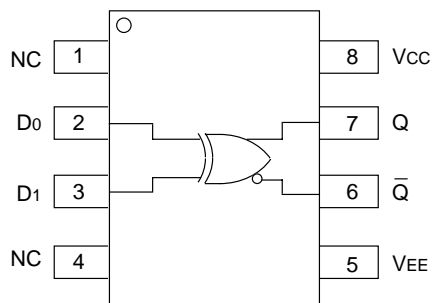
- 260ps propagation delay
- High bandwidth output transitions
- Internal 75K $\Omega$  input pull-down resistors
- Available in 8-pin SOIC package

### 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 NAMES

Pin	Function
D0, D1	Data Inputs
Q	Data Outputs

**PACKAGE/ORDERING INFORMATION****8-Pin SOIC (Z8-1)****Ordering Information<sup>(1)</sup>**

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10EL07ZC	Z8-1	Commercial	HEL07	Sn-Pb
SY10EL07ZCTR <sup>(2)</sup>	Z8-1	Commercial	HEL07	Sn-Pb
SY100EL07ZC	Z8-1	Commercial	XEL07	Sn-Pb
SY100EL07ZCTR <sup>(2)</sup>	Z8-1	Commercial	XEL07	Sn-Pb
SY10EL07ZI	Z8-1	Industrial	HEL07	Sn-Pb
SY10EL07ZITR <sup>(2)</sup>	Z8-1	Industrial	HEL07	Sn-Pb
SY100EL07ZI	Z8-1	Industrial	XEL07	Sn-Pb
SY100EL07ZITR <sup>(2)</sup>	Z8-1	Industrial	XEL07	Sn-Pb
SY10EL07ZG <sup>(3)</sup>	Z8-1	Industrial	HEL07 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY10EL07ZGTR <sup>(2, 3)</sup>	Z8-1	Industrial	HEL07 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL07ZG <sup>(3)</sup>	Z8-1	Industrial	XEL07 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL07ZGTR <sup>(2, 3)</sup>	Z8-1	Industrial	XEL07 with Pb-Free bar-line indicator	Pb-Free NiPdAu

**Notes:**

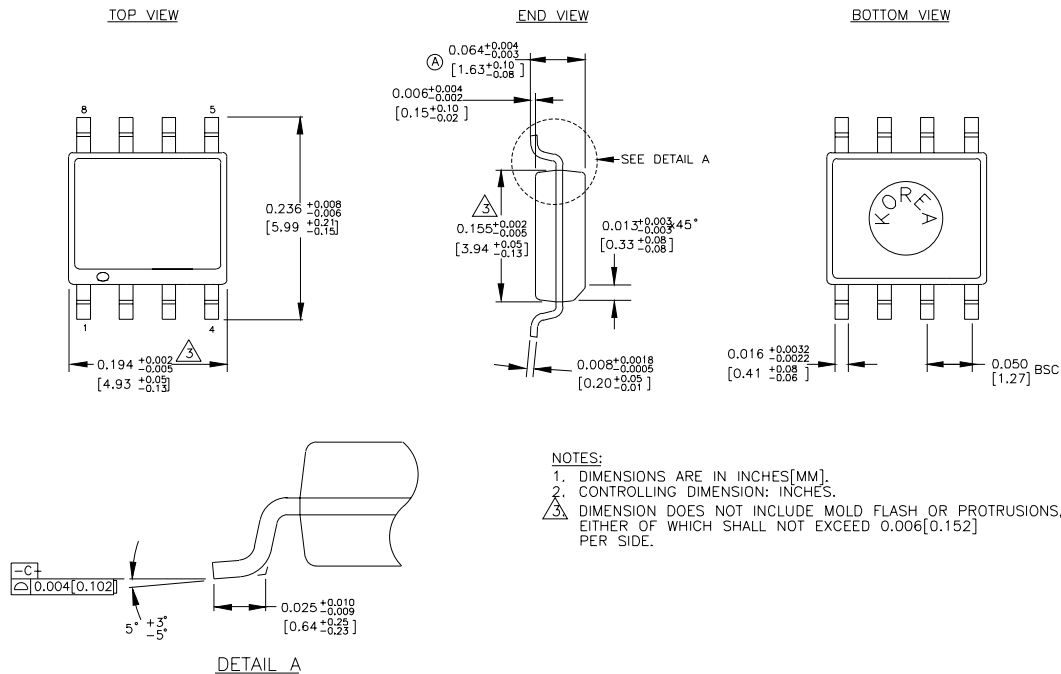
1. Contact factory for die availability. Dice are guaranteed at  $T_A = 25^\circ\text{C}$ , DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

**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>PD</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

**8-PIN SOIC .150" WIDE (Z8-1)**

Rev. 03

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