

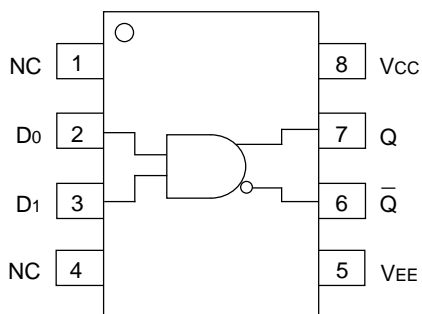
FEATURES

- 240ps propagation delay
- High bandwidth output transitions
- Internal 75K Ω input pull-down resistors
- Available in 8-pin SOIC package

DESCRIPTION

The SY10/100EL04 are 2-input AND/NAND gates. These devices are functionally equivalent to the E104 devices, with higher performance capabilities. With propagation delays and output transition times significantly faster than the E104, the EL04 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 CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = GND

Symbol	Parameter	T _A = -40°C			T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{EE}	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 _{EE}	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 _{IH}	Input HIGH Current													μA
	D ₀	—	—	250	—	—	250	—	—	250	—	—	250	
	D ₁	—	—	150	—	—	150	—	—	150	—	—	150	

AC ELECTRICAL CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = GND

Symbol	Parameter	T _A = -40°C			T _A = 0°C			T _A = +25°C			T _A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
t _{PLH} t _{PHL}	Propagation Delay to Output D	70	235	410	120	235	360	130	240	370	155	265	395	ps
t _r t _f	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
SY10EL04ZC	Z8-1	Commercial	HEL04
SY10EL04ZCTR*	Z8-1	Commercial	HEL04
SY100EL04ZC	Z8-1	Commercial	XEL04
SY100EL04ZCTR*	Z8-1	Commercial	XEL04

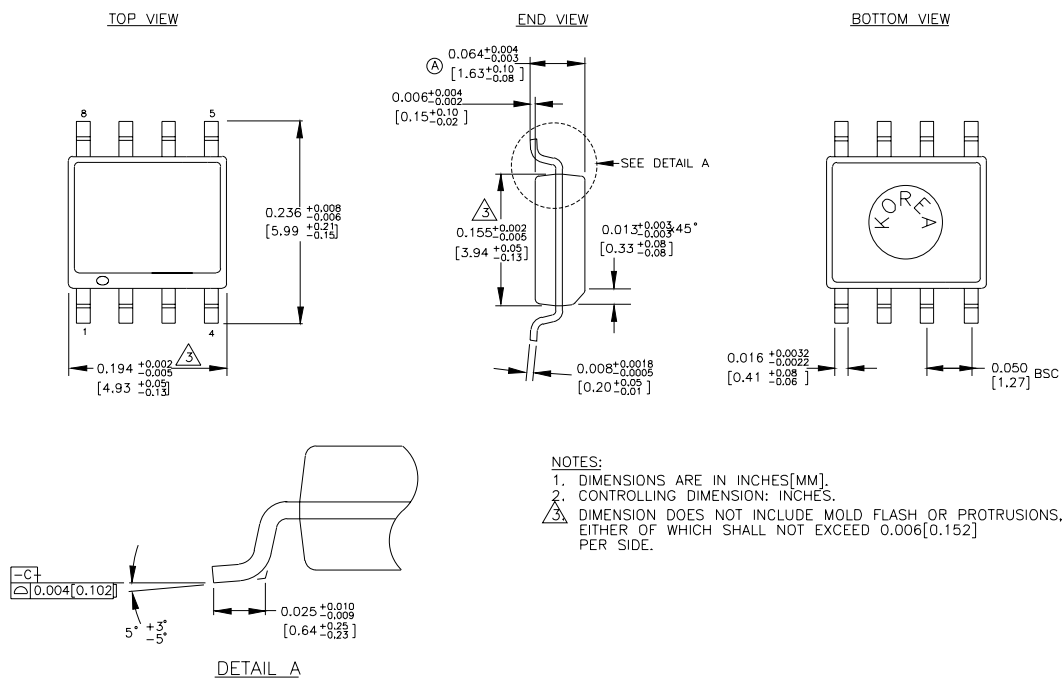
*Tape and Reel

Note 1. Recommended for new designs.

Ordering Code	Package Type	Operating Range	Marking Code
SY10EL04ZI ⁽¹⁾	Z8-1	Industrial	HEL04
SY10EL04ZITR ^{*(1)}	Z8-1	Industrial	HEL04
SY100EL04ZI ⁽¹⁾	Z8-1	Industrial	XEL04
SY100EL04ZITR ^{*(1)}	Z8-1	Industrial	XEL04

*Tape and Reel

8 LEAD SOIC .150" (Z8-1)



Rev. 03

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