Features

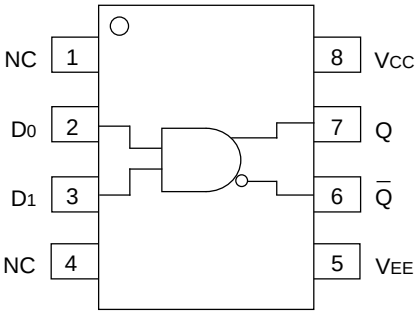
- **240ps propagation delay**
- **High bandwidth output transitions**
- **Internal 75KΩ input pull-down resistors**
- **Available in 8-pin SOIC package**

General 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 Description

D_0, D_1	Data Inputs
Q	Data Outputs



8-Pin SOIC (Z8-1)

(1)

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10EL04ZC	Z8-1	Commercial	HEL04	Sn-Pb
SY10EL04ZCTR[2]	Z8-1	Commercial	HEL04	Sn-Pb
SY100EL04ZC	Z8-1	Commercial	XEL04	Sn-Pb
SY100EL04ZCTR[2]	Z8-1	Commercial	XEL04	Sn-Pb
SY10EL04ZI	Z8-1	Industrial	HEL04	Sn-Pb
SY10EL04ZITR[2]	Z8-1	Industrial	HEL04	Sn-Pb
SY100EL04ZI	Z8-1	Industrial	XEL04	Sn-Pb
SY100EL04ZITR[2]	Z8-1	Industrial	XEL04	Sn-Pb
SY10EL04ZG[3]	Z8-1	Industrial	HEL04 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY10EL04ZGTR[2, 3]	Z8-1	Industrial	HEL04 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL04ZG[3]	Z8-1	Industrial	XEL04 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL04ZGTR[2, 3]	Z8-1	Industrial	XEL04 with Pb-Free bar-line indicator	Pb-Free NiPdAu

Notes:

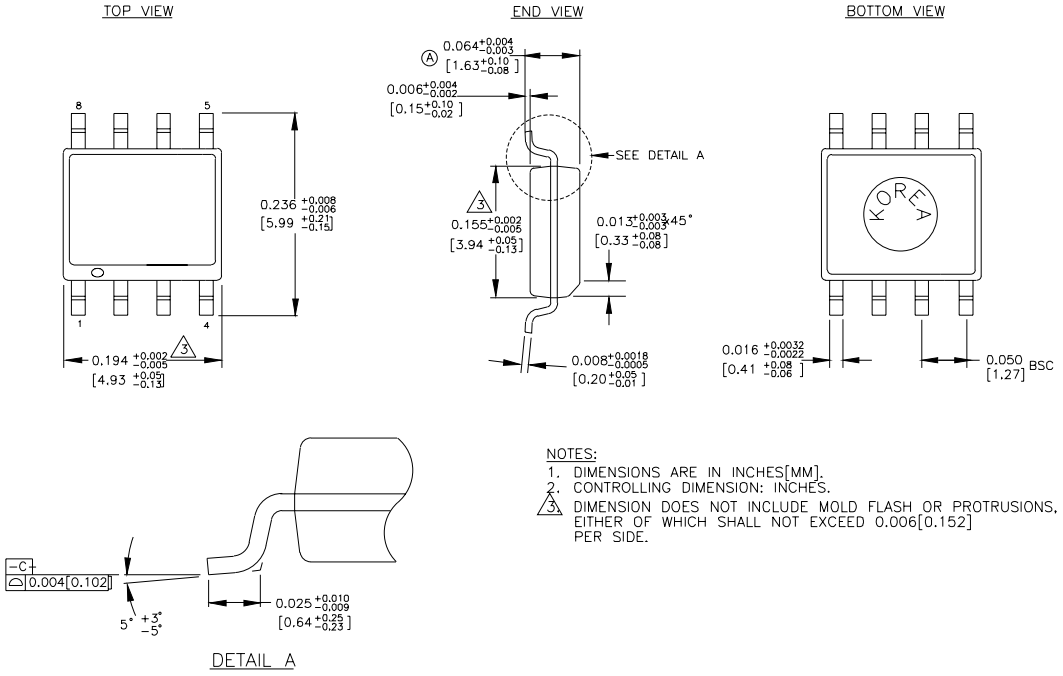
1. Contact factory for die availability. Dice are guaranteed at T_A = 25°C, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

EE = VEE (Min.) to VEE (Max.); VCC = GND

Symbol	Parameter	TA = –40°C			TA = 0°C			TA = +25°C			TA = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
IEE	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	
VEE	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	
IIH	Input HIGH Current													µA
	D0	—	—	250	—	—	250	—	—	250	—	—	250	
	D1	—	—	150	—	—	150	—	—	150	—	—	150	

EE = VEE (Min.) to VEE (Max.); VCC = GND

Symbol	Parameter	TA = –40°C			TA = 0°C			TA = +25°C			TA = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
tPD	Propagation Delay to Output D	70	235	410	120	235	360	130	240	370	155	265	395	ps
tr tf	Output Rise/Fall Times Q (20% to 80%)	100	225	350	100	225	350	100	225	350	100	225	350	ps



NOTES:
1. DIMENSIONS ARE IN INCHES[MM].
2. CONTROLLING DIMENSION: INCHES.
3. DIMENSION DOES NOT INCLUDE MOLD FLASH OR PROTRUSIONS, EITHER OF WHICH SHALL NOT EXCEED 0.006[0.152] PER SIDE.

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