

**LOW-IMPEDANCE  
DRIVER****SY10EL12  
SY100EL12****FEATURES**

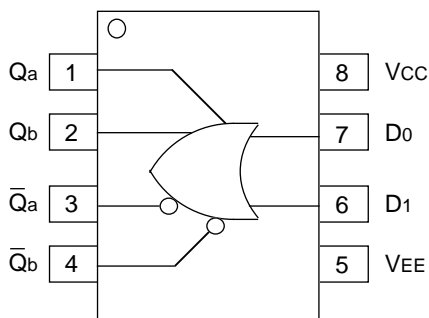
- 290ps propagation delay
- Dual outputs for 25Ω drive applications
- Internal 75KΩ input pull-down resistors
- Available in 8-pin SOIC package

**DESCRIPTION**

The SY10/100EL12 are low-impedance drive buffers. With two pairs of OR/NOR outputs, the devices are ideally suited for high drive applications such as memory addressing. These devices are functionally equivalent to the E112 devices, with higher performance capabilities. With propagation delays significantly faster than the E112, the EL12 is ideally suited for those applications which require the ultimate in AC performance.

**PIN NAMES**

Pin	Function
D0, D1	Data Inputs
Qa, Qb	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
SY10EL12ZC	Z8-1	Commercial	HEL12	Sn-Pb
SY10EL12ZCTR <sup>(2)</sup>	Z8-1	Commercial	HEL12	Sn-Pb
SY100EL12ZC	Z8-1	Commercial	XEL12	Sn-Pb
SY100EL12ZCTR <sup>(2)</sup>	Z8-1	Commercial	XEL12	Sn-Pb
SY10EL12ZI	Z8-1	Industrial	HEL12	Sn-Pb
SY10EL12ZITR <sup>(2)</sup>	Z8-1	Industrial	HEL12	Sn-Pb
SY100EL12ZI	Z8-1	Industrial	XEL12	Sn-Pb
SY100EL12ZITR <sup>(2)</sup>	Z8-1	Industrial	XEL12	Sn-Pb
SY10EL12ZG <sup>(3)</sup>	Z8-1	Industrial	HEL12 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY10EL12ZGTR <sup>(2, 3)</sup>	Z8-1	Industrial	HEL12 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL12ZG <sup>(3)</sup>	Z8-1	Industrial	XEL12 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL12ZGTR <sup>(2, 3)</sup>	Z8-1	Industrial	XEL12 with Pb-Free bar-line indicator	Pb-Free NiPdAu

**Notes:**

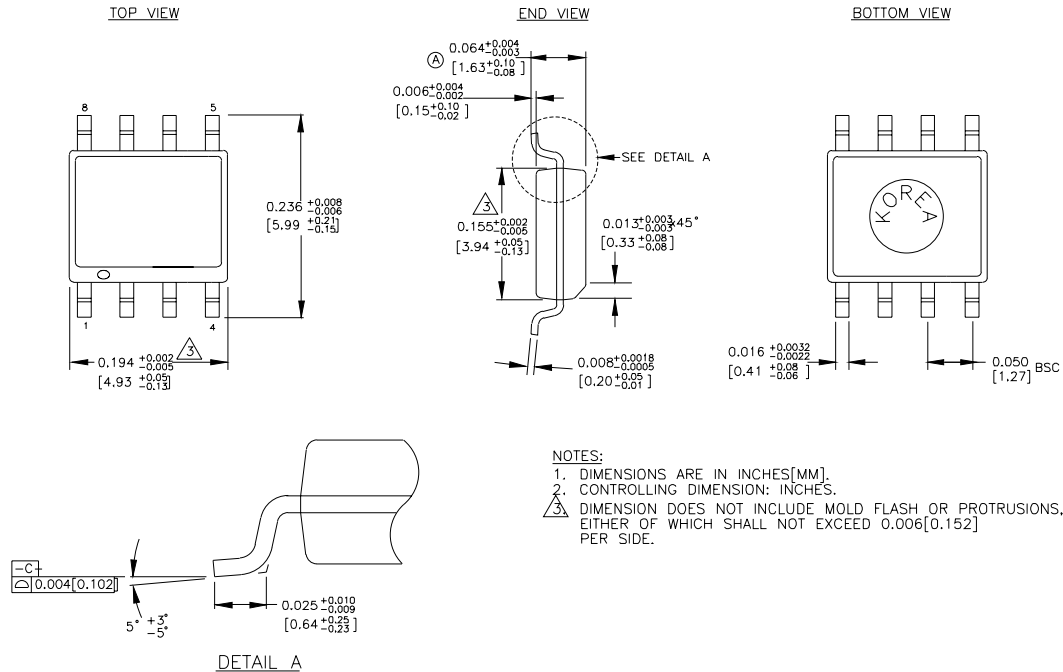
1. Contact factory for die availability. Dice are guaranteed at  $T_A = 25^\circ\text{C}$ , DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

**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	—	—	150	—	—	150	—	—	150	—	—	150	μA

**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	120	280	500	170	280	450	180	290	450	210	320	480	ps
t <sub>r</sub> t <sub>f</sub>	Output Rise/Fall Times Q (20% to 80%)	150	350	550	150	350	550	150	350	550	150	350	550	ps

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

Rev. 03

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