



5V/3.3V  
1:2 DIFFERENTIAL  
FANOUT BUFFER

Precision Edge®  
SY10EL11V  
SY100EL11V

## FEATURES

- 3.3V and 5V power supply options
- 265ps propagation delay
- 5ps skew between outputs
- High bandwidth output transitions
- Internal 75K $\Omega$  input pull-down resistors
- Replaces SY10/100EL11
- Improved output waveform characteristics
- Available in 8-pin SOIC package



Precision Edge®

## DESCRIPTION

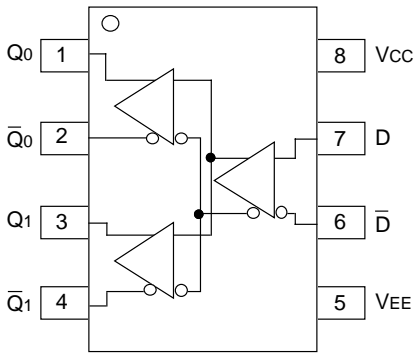
The SY10/100EL11V are 1:2 differential fanout gates. These devices are functionally similar to the E111A/L devices, with higher performance capabilities. Having within-device skews and output transition times significantly improved over the E111A/L, the EL11V is ideally suited for those applications which require the ultimate in AC performance.

The differential inputs of the EL11V employ clamping circuitry to maintain stability under open input conditions. If the inputs are left open (pulled to V<sub>EE</sub>), the Q outputs will go LOW.

## PIN NAMES

Pin	Function
D	Data Inputs
Q <sub>0</sub> , Q <sub>1</sub>	Data Outputs

**PACKAGE/ORDERING INFORMATION**



**8-Pin SOIC (Z8-1)**

**Ordering Information**

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10EL11VZC	Z8-1	Commercial	HEL11V	Sn-Pb
SY10EL11VZCTR <sup>(1)</sup>	Z8-1	Commercial	HEL11V	Sn-Pb
SY100EL11VZC	Z8-1	Commercial	XEL11V	Sn-Pb
SY100EL11VZCTR <sup>(1)</sup>	Z8-1	Commercial	XEL11V	Sn-Pb
SY10EL11VZI	Z8-1	Industrial	HEL11V	Sn-Pb
SY10EL11VZITR <sup>(1)</sup>	Z8-1	Industrial	HEL11V	Sn-Pb
SY100EL11VZI	Z8-1	Industrial	XEL11V	Sn-Pb
SY100EL11VZITR <sup>(1)</sup>	Z8-1	Industrial	XEL11V	Sn-Pb
SY10EL11VZG <sup>(2)</sup>	Z8-1	Industrial	HEL11V with Pb-Free bar line indicator	NiPdAu Pb-Free
SY10EL11VZGTR <sup>(1, 2)</sup>	Z8-1	Industrial	HEL11V with Pb-Free bar line indicator	NiPdAu Pb-Free
SY100EL11VZG <sup>(2)</sup>	Z8-1	Industrial	XEL11V with Pb-Free bar line indicator	NiPdAu Pb-Free
SY100EL11VZGTR <sup>(1, 2)</sup>	Z8-1	Industrial	XEL11V with Pb-Free bar line indicator	NiPdAu Pb-Free

**Notes:**

1. Tape and Reel.
2. NiPdAu Pb-Free package recommended for new designs.

**ABSOLUTE MAXIMUM RATINGS<sup>(1)</sup>**

Symbol	Rating	Value	Unit
V <sub>CC</sub>	Power Supply Voltage (V <sub>EE</sub> = 0)	+6.0 to 0	V
V <sub>EE</sub>	Power Supply Voltage (V <sub>CC</sub> = 0)	-6.0 to 0	V
V <sub>IN</sub>	Input Voltage (V <sub>CC</sub> = 0V, V <sub>IN</sub> not more negative than V <sub>EE</sub> ) Input Voltage (V <sub>EE</sub> = 0V, V <sub>IN</sub> not more positive than V <sub>CC</sub> )	-6.0 to 0 +6.0 to 0	V V
I <sub>OUT</sub>	Output Current -Continuous -Surge	50 100	mA
T <sub>A</sub>	Operating Temperature Range	-40 to +85	°C
T <sub>LEAD</sub>	Lead Temperature (soldering, 20 sec.)	+260	°C
T <sub>STORE</sub>	Storage Temperature Range	-65 to +150	°C
θ <sub>JA</sub>	Thermal Resistance (Junction-to-Ambient) -Still Air -500lfpm	160 109	°C/W °C/W
θ <sub>JC</sub>	Thermal Resistance (Junction-to-Case)	39	°C/W
ESD	Mil Std. 883 Human Body Model, All Pins	>1.5k	V

**Notes:**

1. Permanent device damage may occur if absolute maximum ratings are exceeded. This is a stress rating only and functional operation is not implied at conditions other than those detailed in the operational sections of this data sheet. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

**DC ELECTRICAL CHARACTERISTICS<sup>(1)</sup>**

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

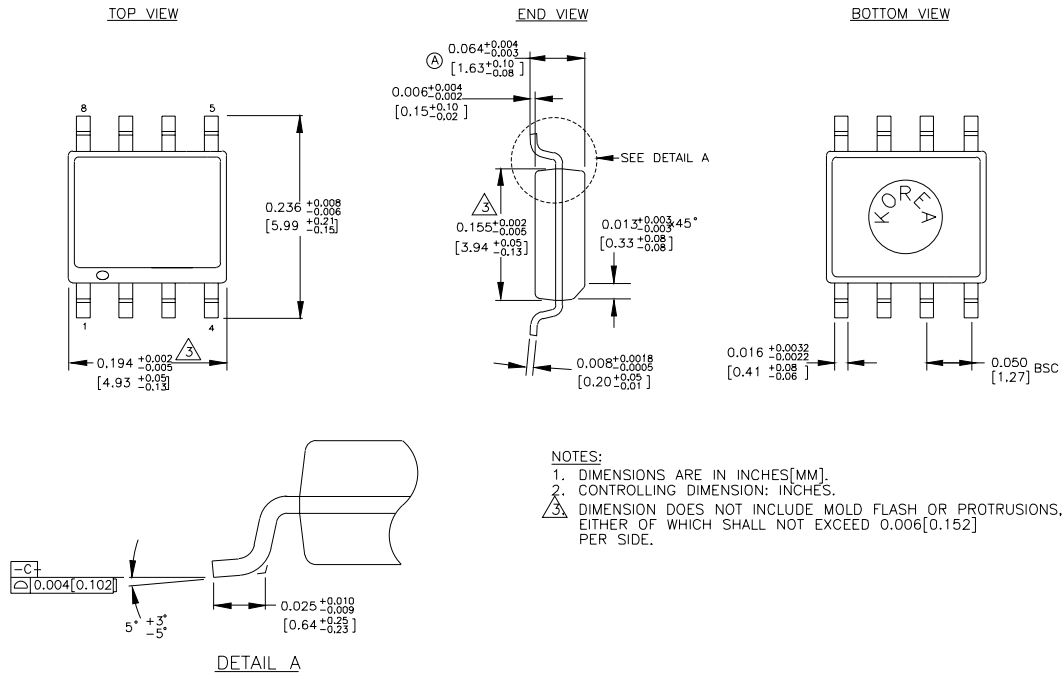
Symbol	Parameter	T <sub>A</sub> = -40°C			T <sub>A</sub> = 0°C			T <sub>A</sub> = +25°C			T <sub>A</sub> = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I <sub>EE</sub>	Power Supply Current	—	26	31	15	26	31	15	26	31	15	26	31	mA
	10EL	—	26	31	15	26	31	15	26	31	15	30	36	
I <sub>IH</sub>	Input HIGH Current	—	—	150	—	—	150	—	—	150	—	—	150	µA

**Note:**

1. Parametric values specified at: 10/100EL11V Series: -3.0V to -5.5V.



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



Rev. 03

**Package Notes:**

**Note 1.** Package meets Level 1 moisture sensitivity.

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