



4-INPUT OR/NOR

SY10EL01
SY100EL01

FEATURES

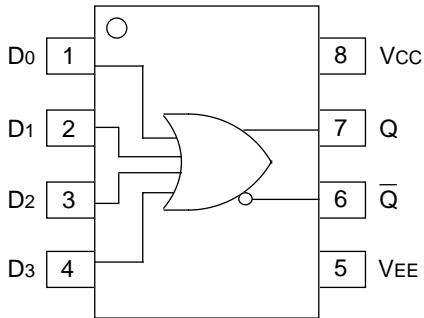
- 230ps propagation delay
- High bandwidth output transitions
- Internal 75K Ω input pull-down resistors
- Available in 8-pin SOIC package

The SY10/100EL01 are 4-input OR/NOR gates. These devices are functionally equivalent to the E101 devices, with higher performance capabilities. With propagation delays and output transition times significantly faster than the E101, the EL01 is ideally suited for those applications which require the ultimate in AC performance.

PIN NAMES

| Pin | Function |
|--------------------------------|--------------|
| D ₀ -D ₃ | Data Inputs |
| Q | Data Outputs |

PACKAGE/ORDERING INFORMATION



8-Pin SOIC (Z8-1)

Ordering Information⁽¹⁾

| Part Number | Package Type | Operating Range | Package Marking | Lead Finish |
|---------------------------------|--------------|-----------------|---------------------------------------|----------------|
| SY10EL01ZC | Z8-1 | Commercial | HEL01 | Sn-Pb |
| SY10EL01ZCTR ⁽²⁾ | Z8-1 | Commercial | HEL01 | Sn-Pb |
| SY100EL01ZC | Z8-1 | Commercial | XEL01 | Sn-Pb |
| SY100EL01ZCTR ⁽²⁾ | Z8-1 | Commercial | XEL01 | Sn-Pb |
| SY10EL01ZI | Z8-1 | Industrial | HEL01 | Sn-Pb |
| SY10EL01ZITR ⁽²⁾ | Z8-1 | Industrial | HEL01 | Sn-Pb |
| SY100EL01ZI | Z8-1 | Industrial | XEL01 | Sn-Pb |
| SY100EL01ZITR ⁽²⁾ | Z8-1 | Industrial | XEL01 | Sn-Pb |
| SY10EL01ZG ⁽³⁾ | Z8-1 | Industrial | HEL01 with Pb-Free bar-line indicator | Pb-Free NiPdAu |
| SY10EL01ZGTR ^(2, 3) | Z8-1 | Industrial | HEL01 with Pb-Free bar-line indicator | Pb-Free NiPdAu |
| SY100EL01ZG ⁽³⁾ | Z8-1 | Industrial | XEL01 with Pb-Free bar-line indicator | Pb-Free NiPdAu |
| SY100EL01ZGTR ^(2, 3) | Z8-1 | Industrial | XEL01 with Pb-Free bar-line indicator | Pb-Free NiPdAu |

Notes:

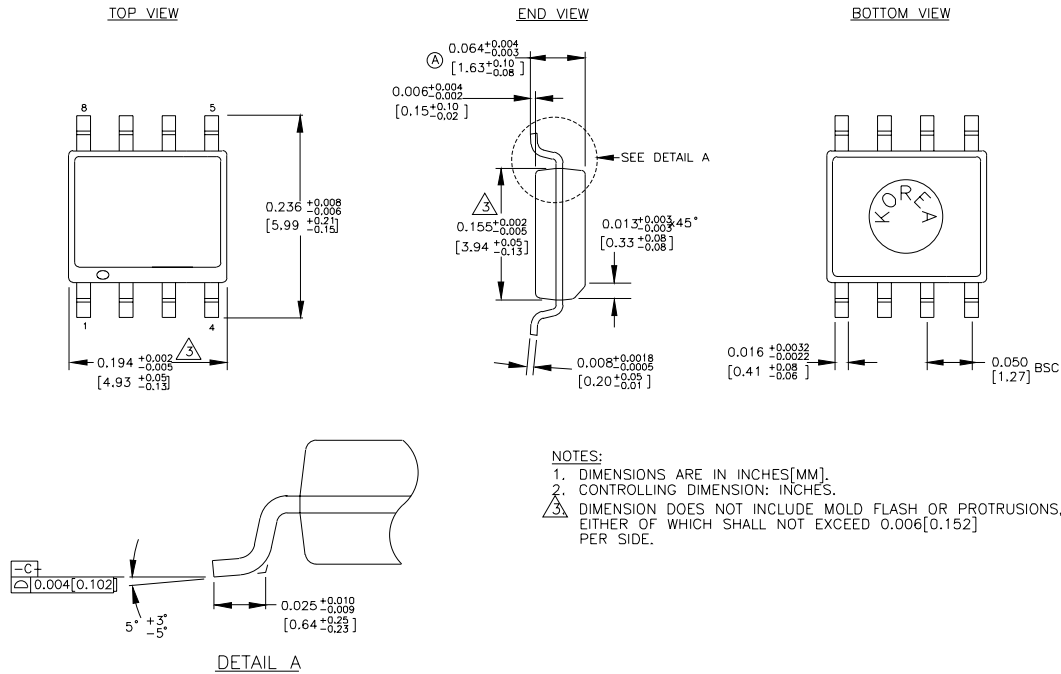
1. Contact factory for die availability. Dice are guaranteed at T_A = 25°C, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

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 | — | — | 150 | — | — | 150 | — | — | 150 | — | — | 150 | μA |

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 _{PD} | Propagation Delay to Output D | 70 | 220 | 370 | 120 | 220 | 320 | 130 | 230 | 330 | 150 | 250 | 350 | ps |
| t _r t _f | Output Rise/Fall Times Q (20% to 80%) | 70 | 225 | 350 | 100 | 225 | 350 | 100 | 225 | 350 | 100 | 225 | 350 | ps |



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