

### HIGH-PERFORMANCE PRODUCTS

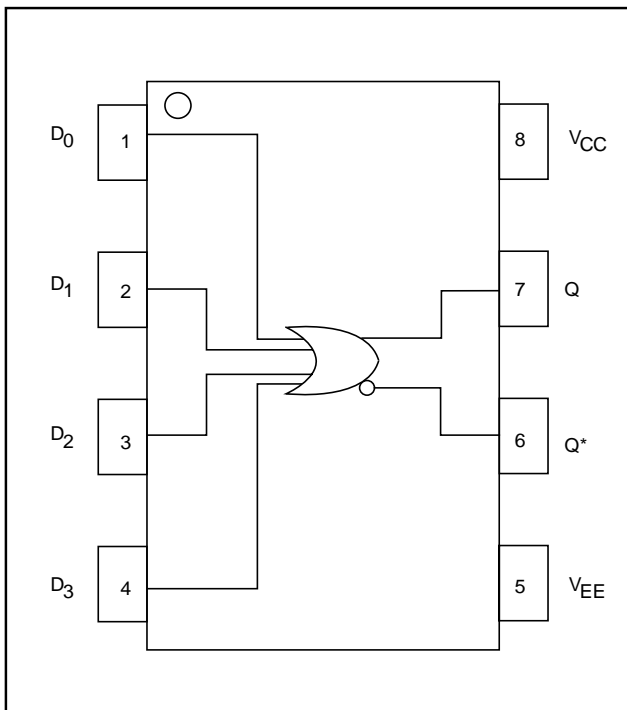
#### Description

The SK10/100EL01W is a 4-Input OR / NOR gate device. This device is fully compatible with MC10/100EL01 and MC10/100LVEL01. With output transition and propagation delay much faster than the E101, the EL01W is ideally suited for those applications which require ultimate AC performance.

#### Features

- Extended Supply Voltage Range: ( $V_{EE} = -5.5V$  to  $-3.0V$ ,  $V_{CC} = 0V$ ) or ( $V_{CC} = +3.0V$  to  $+5.5V$ ,  $V_{EE}=0V$ )
- High Bandwidth Output Transition
- 230ps Propagation Delay
- 75K $\Omega$  Internal Input Pulldown Resistors
- Fully Compatible with MC10/100EL01 and MC10/100LVEL01
- ESD Protection of >4000V
- Industrial Temperature Range:  $-40^{\circ}C$  to  $85^{\circ}C$
- Available in 8-Pin SOIC (150 mils) Package

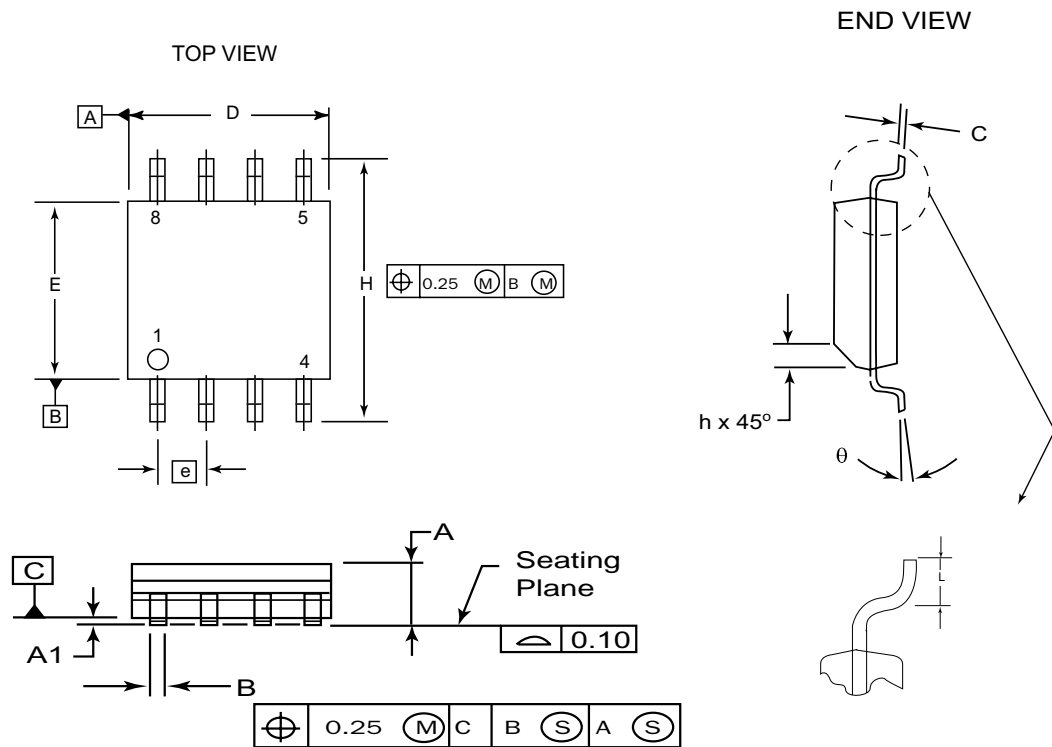
#### Functional Block Diagram



#### Pin Names

Pin	Function
D <sub>0</sub> - D <sub>3</sub>	Data Inputs
Q, Q*	Data Outputs

## 8 Pin SOIC Package



DIM	MILLIMETERS	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.33	0.51
C	0.19	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27 BSC	
H	5.80	6.20
h	0.25	0.50
L	0.40	1.27
$\theta$	0°	8°

**NOTES:**

1. Dimensions are in millimeters.
2. Dimensions D and E do not include mold protrusion.
3. Maximum mold protrusion 0.15 per side.
4. Dimension B does not include Dambar protrusion. Allowable Dambar protrusion shall be 0.127 total in excess of the B dimension at maximum material condition.

**HIGH-PERFORMANCE PRODUCTS**
**DC Characteristics**
**SK10/100EL01W DC Electrical Characteristics (Notes 1, 2)**
 $(V_{CC} - V_{EE} = 3.0V \text{ to } 5.5V; V_{OUT} \text{ Loaded } 50\Omega \text{ to } V_{CC} - 2.0V)$ 

Symbol	Characteristic	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	
I <sub>IH</sub>	Input HIGH Current D, D*			150			150			150			150	μA
I <sub>EE</sub>	Power Supply Current 10 EL 100 EL			13			13			13			13	mA
				15			15			17			19	mA
V <sub>CC</sub> - V <sub>EE</sub>	Power Supply Voltage	3.0		5.5	3.0		5.5	3.0		5.5	3.0		5.5	V

**AC Characteristics**
**SK10/100EL01W AC Electrical Characteristics**
 $(V_{CC} - V_{EE} = 3.0V \text{ to } 5.5V; V_{OUT} \text{ Loaded } 50\Omega \text{ to } V_{CC} - 2.0V)$ 

Symbol	Characteristic	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	
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay Q, Q* (Diff)	240		375	255		345	230		345	215		345	ps
t <sub>r</sub> , t <sub>f</sub>	Output Rise/Fall Times (20% - 80%) Q, Q*	125		360	125		375	125		380	130		395	ps

**Notes:**

- 10EL circuits are designed to meet the DC specifications shown in the table after thermal equilibrium has been established. The circuit is in a test socket or mounted on a printed circuit board and transverse airflow greater than 500 lfpm is maintained. Outputs are terminated through a 50Ω resistor to V<sub>CC</sub> -2.0V except where otherwise specified on the individual data sheets.
- 100K circuits are designed to meet the DC specifications shown in the table where transverse airflow greater than 500 lfpm is maintained.
- For standard ECL DC specifications, refer to the ECL Logic Family Standard DC Specifications Data Sheet.
- For part ordering descriptions, see HPP Part Ordering Information Data Sheet.

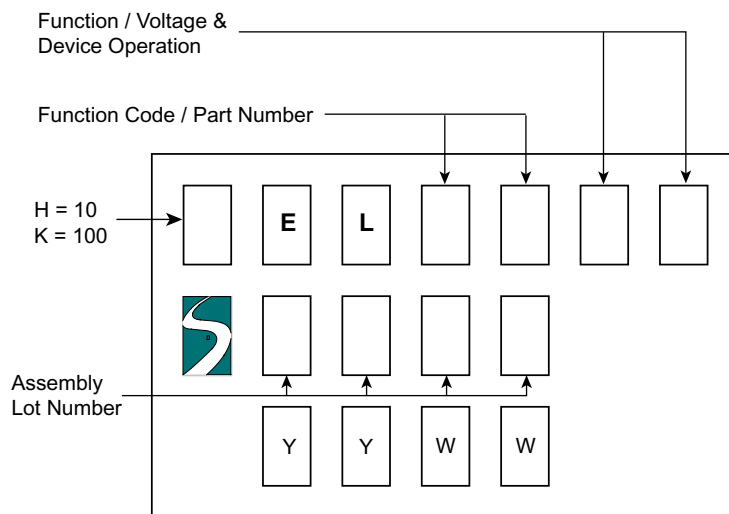
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### Ordering Information

Ordering Code	Package ID	Temperature Range
SK10EL01WD	8-SOIC	Industrial
SK10EL01WDT	8-SOIC	Industrial
SK100EL01WD	8-SOIC	Industrial
SK100EL01WDT	8-SOIC	Industrial
SK10EL01WU	Die	
SK100EL01WU	Die	

### Marking Information

#### 8 PIN SOIC PACKAGE



YY: Last two digits of the Year  
WW: Working Week

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