

HIGH-PERFORMANCE PRODUCTS

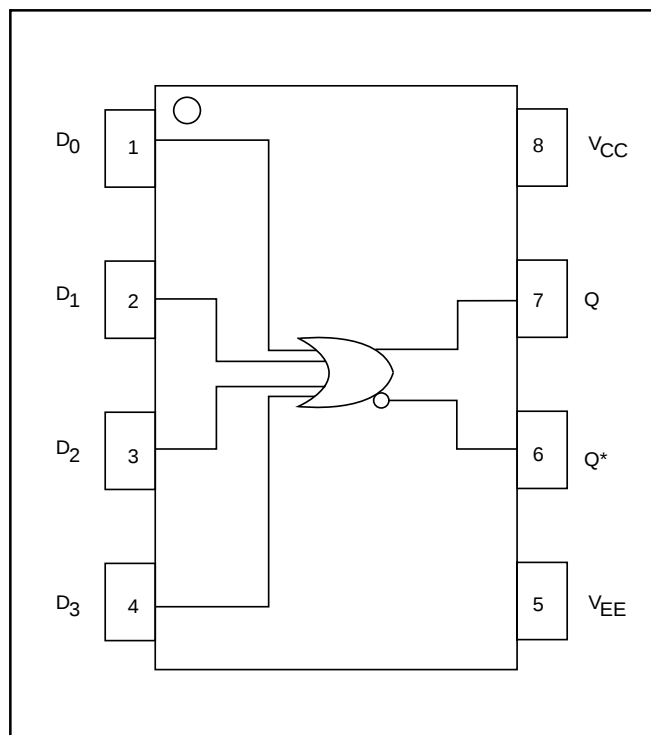
Description

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

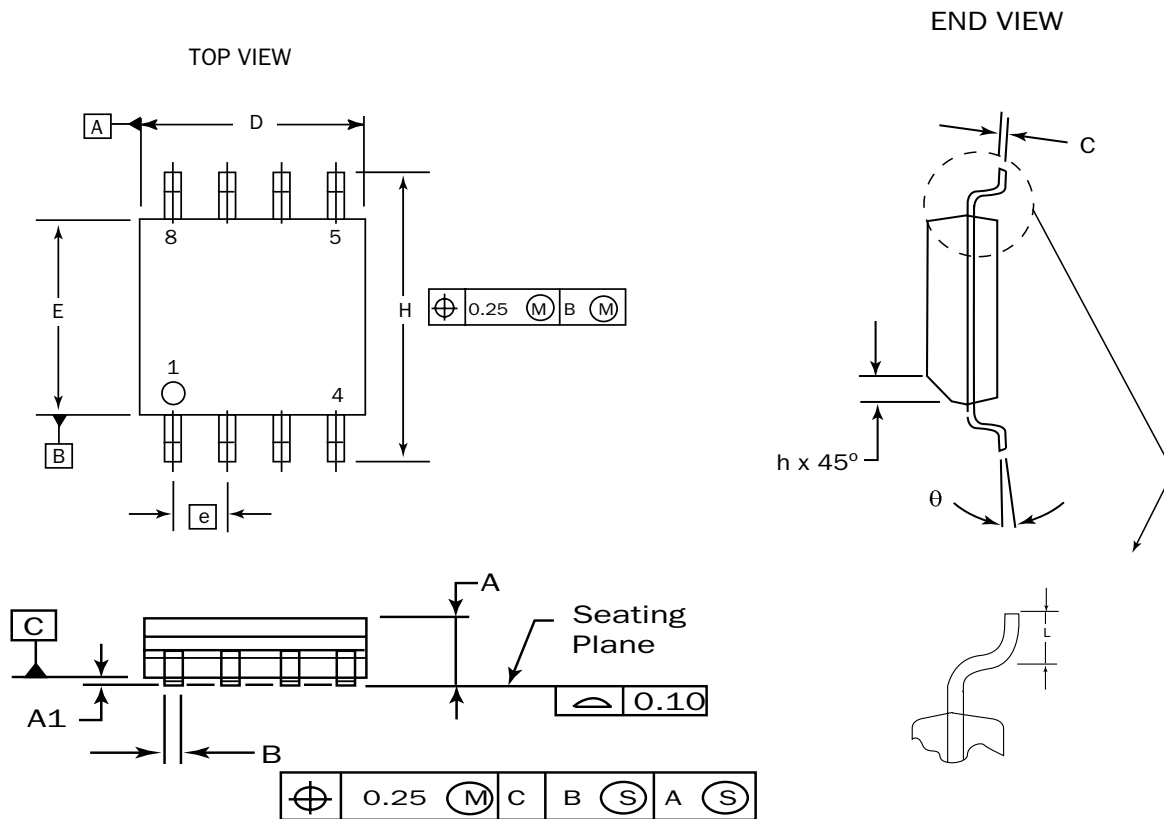
- Extended Supply Voltage Range: ($V_{EE} = -5.5V$ to $-3.0V$, $V_{CC} = 0V$) or ($V_{CC} = +3.0V$ to $+5.5V$, $V_{EE} = 0V$)
- High Bandwidth Output Transition
- 230 ps Propagation Delay
- Internal $75K\Omega$ Input Pulldown Resistors
- Fully Compatible with MC10/100EL01 and MC10/100LVEL01
- ESD Protection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

Functional Block Diagram



Pin Names

Pin	Function
$D_0 - D_3$	Data Inputs
Q, Q^*	Data Outputs

8 Lead 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
θ	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.

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DC Characteristics
SK10/100EL01W DC Electrical Characteristics (Notes 1, 2, 3)
 $(V_{CC} - V_{EE} = 3.0V \text{ to } 5.5V; V_{OUT} \text{ Loaded } 50\Omega \text{ to } V_{CC} - 2.0V)$

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 _{IH}	Input HIGH Current D, D*			150			150			150			150	μA
I _{EE}	Power Supply Current 10 EL 100 EL			13			13			13			13	mA
				15			15			17			19	mA
V _{CC} - V _{EE}	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 _{PLH} t _{PL}	Propagation Delay Q, Q* (Diff)	240		375	255		345	230		345	215		345	ps
t _r , t _f	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_{CC} -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.

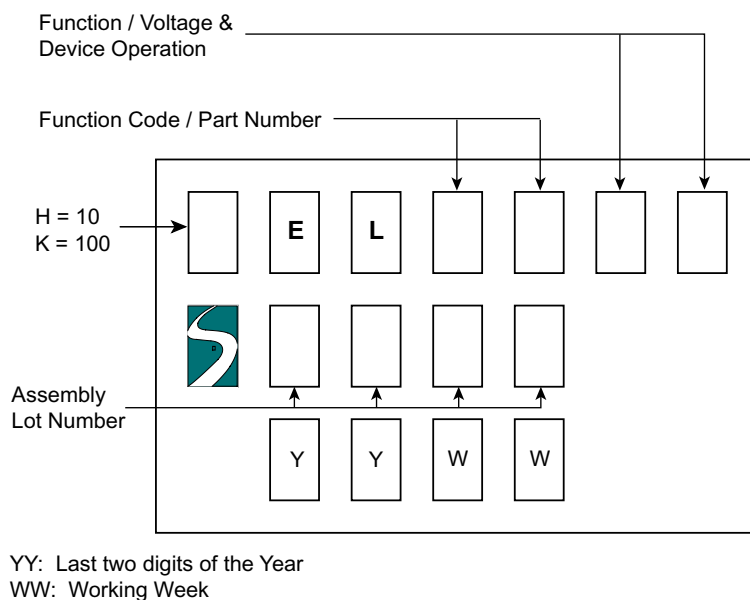
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Ordering Information

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



Contact Information

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