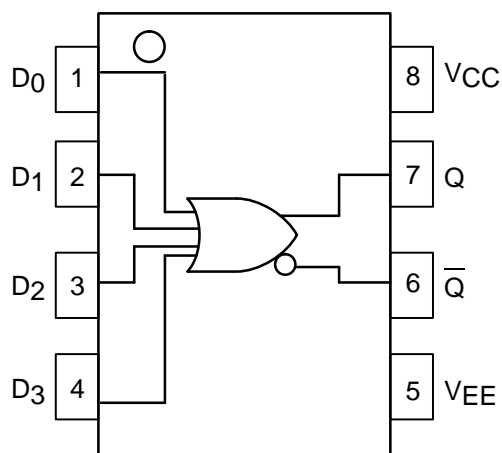


## 4-Input OR/NOR

The MC10EL/100EL01 is a 4-input OR/NOR gate. The device is functionally equivalent to the E101 device 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.

- 230ps Propagation Delay
- High Bandwidth Output Transitions
- 75kΩ Internal Input Pulldown Resistors
- >1000V ESD Protection

### LOGIC DIAGRAM AND PINOUT ASSIGNMENT



## MC10EL01 MC100EL01



**D SUFFIX**  
PLASTIC SOIC PACKAGE  
CASE 751-05

### PIN DESCRIPTION

PIN	FUNCTION
D0–D3	Data Inputs
Q	Data Outputs

### DC CHARACTERISTICS ( $V_{EE} = V_{EE(min)}$ to $V_{EE(max)}$ ; $V_{CC} = GND$ )

Symbol	Characteristic	-40°C			0°C			25°C			85°C			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
$I_{EE}$	Power Supply Current 10EL 100EL		14 14	17 17		14 14	17 17		14 14	17 17		14 16	17 20	mA
$V_{EE}$	Power Supply Voltage 10EL 100EL	-4.75 -4.20	-5.2 -4.5	-5.5 -5.5	-4.75 -4.20	-5.2 -4.5	-5.5 -5.5	-4.75 -4.20	-5.2 -4.5	-5.5 -5.5	-4.75 -4.20	-5.2 -4.5	-5.5 -5.5	V
$I_{IH}$	Input HIGH Current			150			150			150			150	μA

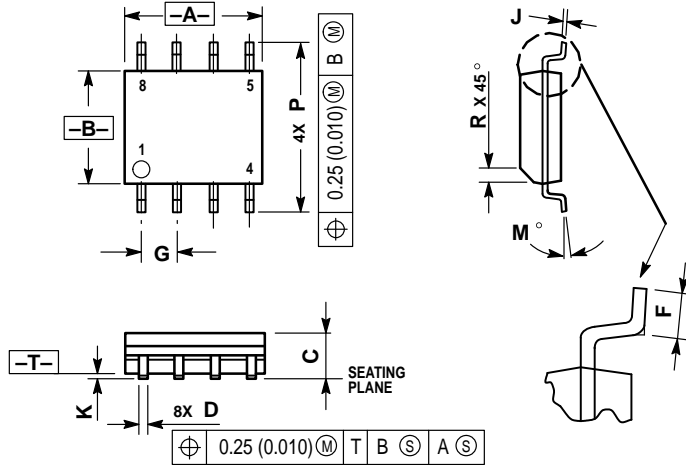
### AC CHARACTERISTICS ( $V_{EE} = V_{EE(min)}$ to $V_{EE(max)}$ ; $V_{CC} = GND$ )

Symbol	Characteristic	-40°C			0°C			25°C			85°C			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
$t_{PLH}$ $t_{PHL}$	Propagation Delay to Output	70	220	370	120	220	320	130	230	330	150	250	350	ps
$t_r$ $t_f$	Output Rise/Fall Times Q (20% – 80%)	100	225	350	100	225	350	100	225	350	100	225	350	ps



OUTLINE DIMENSIONS

D SUFFIX  
PLASTIC SOIC PACKAGE  
CASE 751-05  
ISSUE P



NOTES:

1. DIMENSIONS A AND B ARE DATUMS AND T IS A DATUM SURFACE.
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
3. DIMENSIONS ARE IN MILLIMETER.
4. DIMENSION A AND B DO NOT INCLUDE MOLD PROTRUSION.
5. MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.
6. DIMENSION D DOES NOT INCLUDE MOLD PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 TOTAL IN EXCESS OF THE D DIMENSION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS	
	MIN	MAX
A	4.80	5.00
B	3.80	4.00
C	1.35	1.75
D	0.35	0.49
F	0.40	1.25
G	1.27 BSC	
J	0.18	0.25
K	0.10	0.25
M	0°	7°
P	5.80	6.20
R	0.25	0.50

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