4-Input OR/NOR

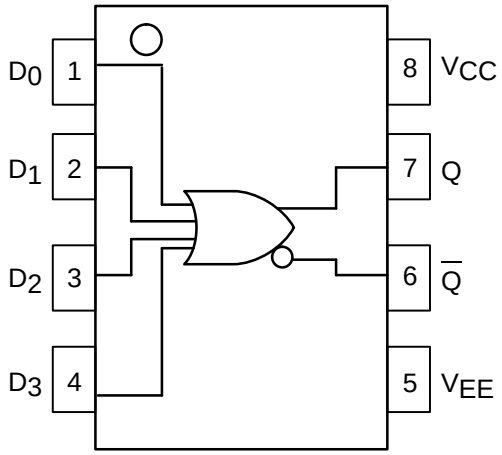
MC100LVEL01

The MC100LVEL01 is a 4–input OR/NOR gate. The device is functionally equivalent to the EL01 device and works from a –3.3V supply. With AC performance similar to the EL01 device, the LVEL01 is ideal for low voltage applications which require the ultimate in AC performance.

- 370ps Propagation Delay
- High Bandwidth Output Transitions
- Specified for –3.3V (or 3.3V) Supply Voltage
- 75kΩ Internal Input Pulldown Resistors
- >2000V ESD Protection

D SUFFIX
PLASTIC SOIC PACKAGE
CASE 751–05

LOGIC DIAGRAM AND PINOUT ASSIGNMENT



PIN DESCRIPTION

PIN	FUNCTION
D0–D3	Data Inputs
Q	Data Outputs

DC CHARACTERISTICS

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		15	20		15	20		15	20		17	22	mA
V_{EE}	Power Supply Voltage	–3.0	–3.3	–3.8	–3.0	–3.3	–3.8	–3.0	–3.3	–3.8	–3.0	–3.3	–3.8	V
I_{IH}	Input HIGH Current			150			150			150			150	µA

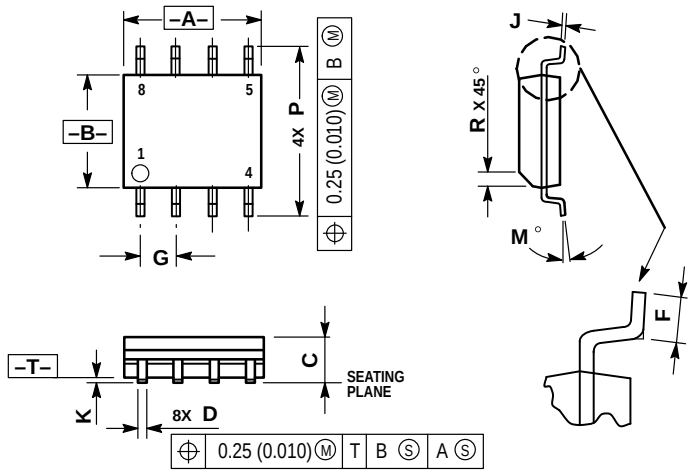
AC CHARACTERISTICS (V_{EE} = V_{EE}(min) to V_{EE}(max); V_{CC} = GND)

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	210	310	510	260	360	460	270	370	470	290	390	490	ps
t_{skew}	Input Skew		40			40			40			40		ps
t_r t_f	Output Rise/Fall Times Q (20% – 80%)	120	225	320	120	225	320	120	225	320	120	225	320	ps

MOTOROLA

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.

	MILLIMETERS	
DIM	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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