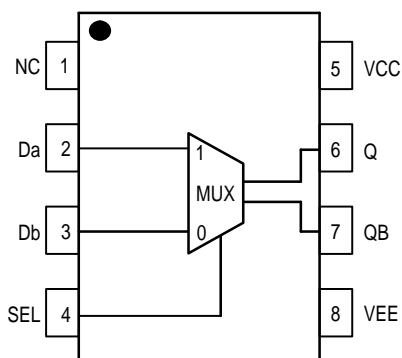


## 2:1 Multiplexer

The MC100LVEL58 is a 2:1 multiplexer. The device is pin and functionally equivalent to the EL58 and works from a  $-3.3\text{V}$  supply. With AC performance similar to the EL58 device, the LVEL58 is ideal for low voltage applications which require the ultimate in AC performance.

- 440ps Typical Propagation Delays
- High Bandwidth Output Transitions
- Specified for  $-3.3\text{V}$  (or  $3.3\text{V}$ ) Supply Voltage
- $75\text{k}\Omega$  Internal Input Pulldown Resistors
- $>4000\text{V}$  ESD Protection

Logic Diagram and Pinout: 8-Lead SOIC (Top View)



## MC100LVEL58



**D SUFFIX**  
PLASTIC SOIC PACKAGE  
CASE 751-06

TRUTH TABLE

SEL	Data
H	a
L	b

PIN NAMES

Pins	Function
Da, Db	Data Inputs
Q	Data Outputs

### MC100LVEL58

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

Symbol	Characteristic	$-40^{\circ}\text{C}$			$0^{\circ}\text{C}$			$25^{\circ}\text{C}$			$85^{\circ}\text{C}$			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
$I_{EE}$	Power Supply Current		21	28		21	28		21	28		23	30	mA
$V_{EE}$	Power Supply Voltage	3.0		3.8	3.0		3.8	3.0		3.8	3.0		3.8	V
$I_{IH}$	Input HIGH Current			150			150			150			150	$\mu\text{A}$

### MC100LVEL58

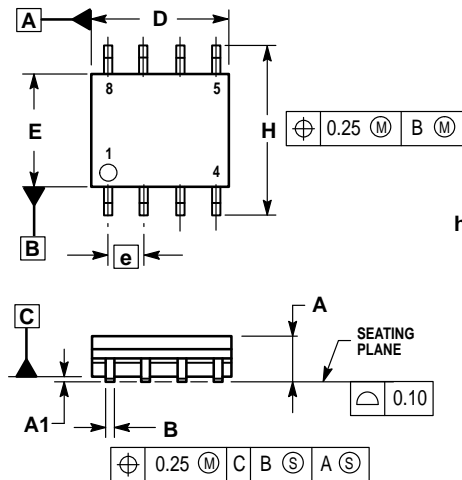
**AC CHARACTERISTICS** ( $V_{EE} = V_{EE}(\text{min})$  to  $V_{EE}(\text{max})$ ;  $V_{CC} = \text{GND}$ )

Symbol	Characteristic	$-40^{\circ}\text{C}$			$0^{\circ}\text{C}$			$25^{\circ}\text{C}$			$85^{\circ}\text{C}$			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
$t_{PLH}$	Propagation Delay D Q	340	435	560	340	435	560	350	440	570	370	450	590	ps
$t_{PHL}$	Delay SEL Q	350	455	570	350	455	570	360	460	580	380	470	600	
$t_r$	Output Rise/Fall Times Q	100		320	100		320	100		320	100		320	ps
$t_f$	(20% – 80%)													




OUTLINE DIMENSIONS

D SUFFIX  
PLASTIC SOIC PACKAGE  
CASE 751-06  
ISSUE T



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
  2. DIMENSIONS ARE IN MILLIMETER.
  3. DIMENSION D AND E DO NOT INCLUDE MOLD PROTRUSION.
  4. MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.
  5. 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.

DIM	MILLIMETERS	
A	1.35	1.75
A1	0.10	0.25
B	0.35	0.49
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	1.25
θ	0°	7°

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