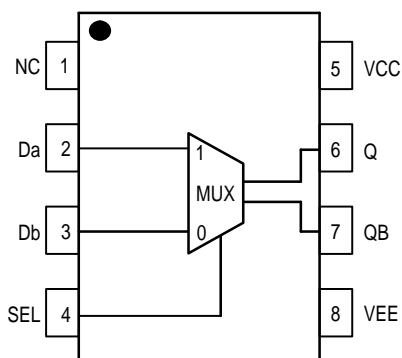# 2:1 Multiplexer

The MC100LVEL58 is a 2:1 multiplexer. The device is pin and functionally equivalent to the EL58 and works from a –3.3V 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 –3.3V (or 3.3V) Supply Voltage
- 75kΩ Internal Input Pulldown Resistors
- >4000V ESD Protection

MC100LVEL58

D SUFFIX
PLASTIC SOIC PACKAGE
CASE 751–06

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

TRUTH TABLE

SEL	Data
H	a
L	b

PIN NAMES

Pins	Function
Da, Db	Data Inputs
Q	Data Outputs

MC100LVEL58
DC CHARACTERISTICS (V_{EE} = VEE(min) to VEE(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		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	μA

MC100LVEL58
AC CHARACTERISTICS (V_{EE} = VEE(min) to VEE(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 D Q Delay SEL Q	340 350	435 455	560 570	340 350	435 455	560 570	350 360	440 460	570 580	370 380	450 470	590 600	ps
t_r t_f	Output Rise/Fall Times Q (20% – 80%)	100		320	100		320	100		320	100		320	ps

REV 0

OUTLINE DIMENSIONS

D SUFFIX
PLASTIC SOIC PACKAGE
CASE 751–06
ISSUE T
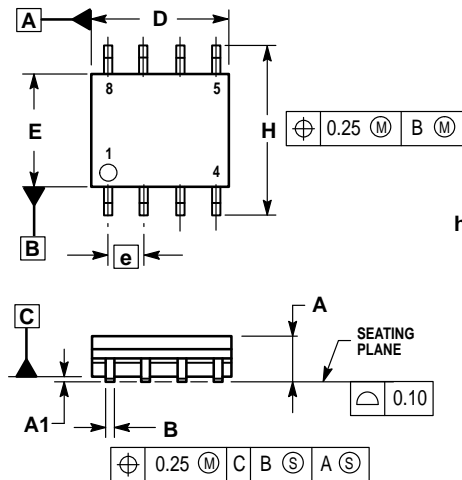
NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. DIMENSIONS ARE IN MILLIMETER.
3. DIMENSION D AND E DO NOT INCLUDE MOLD PROTRUSION.
4. MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.
5. DIMENSION B DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 TOTAL IN EXCESS OF THE B DIMENSION AT MAXIMUM MATERIAL CONDITION.

| DIM | MILLIMETERS | |
	MIN	MAX
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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