

## 2:1 Multiplexer

The MC10EL/100EL58 is a 2:1 multiplexer. The device is functionally equivalent to the E158 device with higher performance capabilities. With propagation delays and output transition times significantly faster than the E158 the EL58 is ideally suited for those applications which require the ultimate in AC performance.

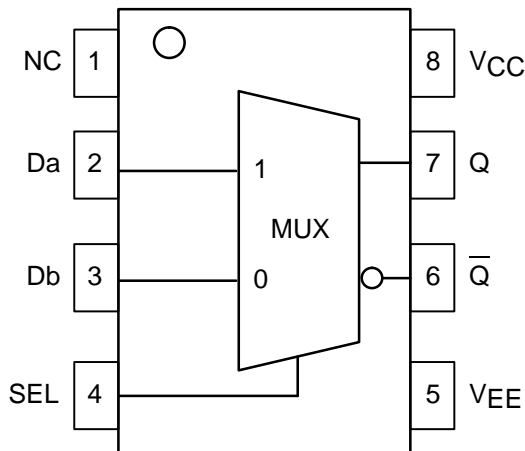
- 230ps Propagation Delay
- High Bandwidth Output Transitions
- 75kΩ Internal Input Pulldown Resistors
- >1000V ESD Protection

# MC10EL58 MC100EL58



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

### LOGIC DIAGRAM AND PINOUT ASSIGNMENT



### FUNCTION TABLE

SEL	Data
H	a
L	b

### PIN DESCRIPTION

PIN	FUNCTION
D0, D1	Data Inputs
Q	Data Outputs

### DC CHARACTERISTICS (V<sub>EE</sub> = V<sub>EE</sub>(min) to V<sub>EE</sub>(max); V<sub>CC</sub> = 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 <sub>EE</sub>	Power Supply Current 10EL 100EL		14 14	17 17		14 14	17 17		14 14	17 17		14 16	17 19	mA
V <sub>EE</sub>	Power Supply Voltage 10EL 100EL	-4.94 -4.20	-5.2 -4.5	-5.5 -5.5	-4.94 -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 <sub>IH</sub>	Input HIGH Current			150			150			150			150	μA

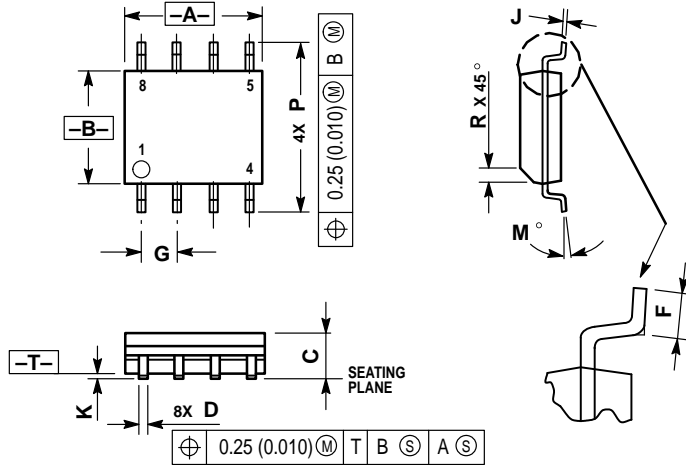
### AC CHARACTERISTICS (V<sub>EE</sub> = V<sub>EE</sub>(min) to V<sub>EE</sub>(max); V<sub>CC</sub> = GND)

Symbol	Characteristic	-40°C			0°C			25°C			85°C			Unit
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
t <sub>PLH</sub> t <sub>PHL</sub>	Propagation Delay to Output D to Q SEL to Q	60 90	220 250	380 410	110 140	220 250	330 360	120 150	230 260	340 370	140 170	250 280	360 390	ps
t <sub>r</sub> t <sub>f</sub>	Output Rise/Fall Times Q (20% - 80%)	100	225	350	100	225	350	100	225	350	100	225	350	ps



OUTLINE DIMENSIONS

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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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How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution; P.O. Box 20912; Phoenix, Arizona 85036. 1-800-441-2447 or 602-303-5454

JAPAN: Nippon Motorola Ltd.; Tatsumi-SPD-JLDC, 6F Seibu-Butsuryu-Center, 3-14-2 Tatsumi Koto-Ku, Tokyo 135, Japan. 03-81-3521-8315

MFAX: RMFAX0@email.sps.mot.com - TOUCHTONE 602-244-6609  
INTERNET: http://Design-NET.com

ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park, 51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

