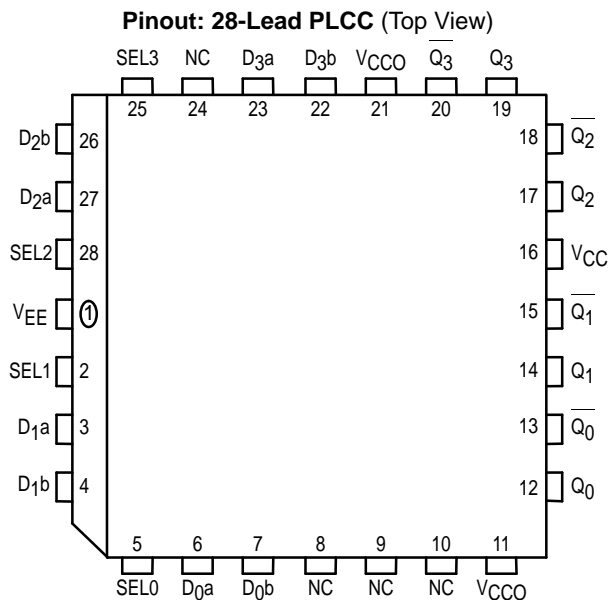


Quad 2:1 Multiplexer

The MC10E/100E157 contains four 2:1 multiplexers with differential outputs. The output data are controlled by the individual Select (SEL) inputs. The individual select control makes the devices well suited for random logic designs.

- Individual Select Controls
- 550ps Max. D to Output
- 800ps Max. SEL to Output
- Extended 100E V_{EE} Range of – 4.2V to – 5.46V
- Internal 75kΩ Input Pulldown Resistors



* All V_{CC} and V_{CCO} pins are tied together on the die.

PIN NAMES

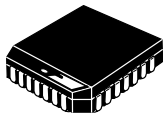
Pin	Function
D _{0a} – D _{3a}	Input Data a
D _{0b} – D _{3b}	Input Data b
SEL ₀ – SEL ₃	Select Inputs
$\overline{Q_0}$ – $\overline{Q_3}$	True Outputs
Q ₀ – Q ₃	Inverted Outputs

TRUTH TABLE

SEL	Data
H	a
L	b

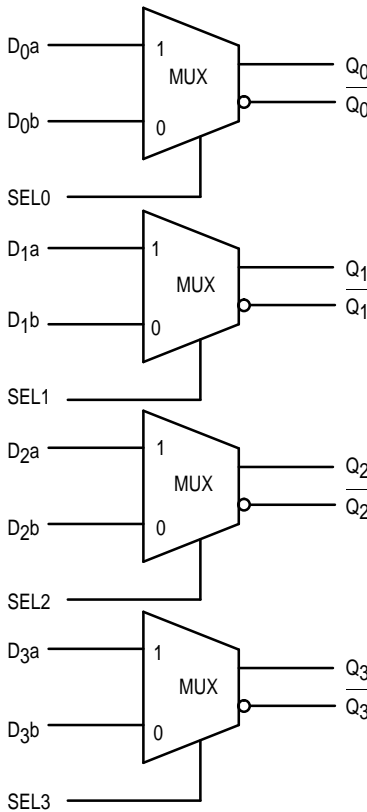
MC10E157
MC100E157

QUAD 2:1
MULTIPLEXER



FN SUFFIX
PLASTIC PACKAGE
CASE 776-02

LOGIC DIAGRAM



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

Symbol	Characteristic	0°C			25°C			85°C			Unit	Condition
		min	typ	max	min	typ	max	min	typ	max		
I_{IH}	Input HIGH Current D SEL			200 150			200 150			200 150	μA	
I_{EE}	Power Supply Current 10E 100E		32 32	38 38		32 32	38 38		32 37	38 44	mA	

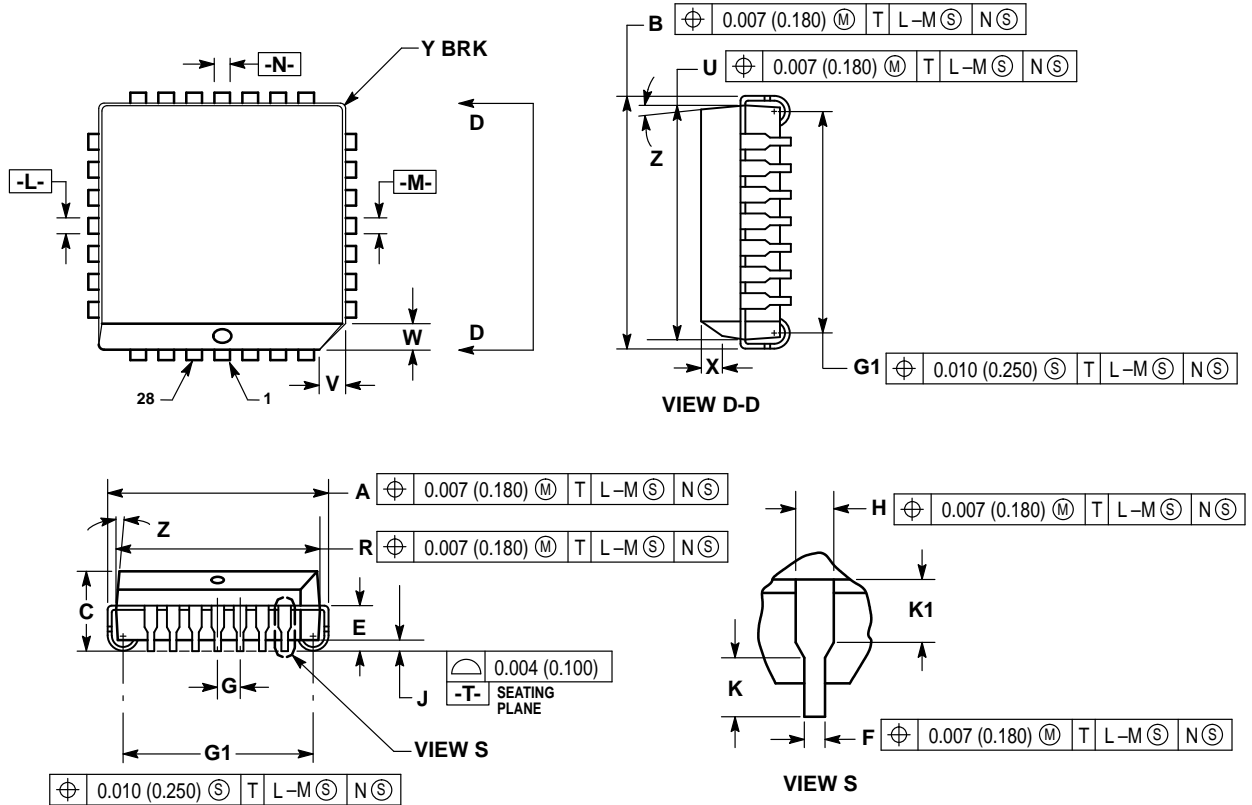
AC CHARACTERISTICS ($V_{EE} = V_{EE(min)}$ to $V_{EE(max)}$; $V_{CC} = V_{CCO} = GND$)

Symbol	Characteristic	0°C			25°C			85°C			Unit	Condition
		min	typ	max	min	typ	max	min	typ	max		
t_{PLH} t_{PHL}	Propagation Delay to Output D SEL	220 425	380 600	550 800	220 425	380 600	550 800	220 425	380 600	550 800	ps	
t_{SKEW}	Within-Device Skew		70			70			70		ps	1
t_r t_f	Rise/Fall Times 20 - 80%	275	400	650	275	400	650	275	400	650	ps	

1. Within-device skew is defined as identical transitions on similar paths through a device.

OUTLINE DIMENSIONS

FN SUFFIX
PLASTIC PLCC PACKAGE
CASE 776-02
ISSUE D



NOTES:

- DATUMS -L-, -M-, AND -N- DETERMINED WHERE TOP OF LEAD SHOULDER EXITS PLASTIC BODY AT MOLD PARTING LINE.
- DIM G1, TRUE POSITION TO BE MEASURED AT DATUM -T-, SEATING PLANE.
- DIM R AND U DO NOT INCLUDE MOLD FLASH. ALLOWABLE MOLD FLASH IS 0.010 (0.250) PER SIDE.
- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: INCH.
- THE PACKAGE TOP MAY BE SMALLER THAN THE PACKAGE BOTTOM BY UP TO 0.012 (0.300). DIMENSIONS R AND U ARE DETERMINED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY EXCLUSIVE OF MOLD FLASH, TIE BAR BURRS, GATE BURRS AND INTERLEAD FLASH, BUT INCLUDING ANY MISMATCH BETWEEN THE TOP AND BOTTOM OF THE PLASTIC BODY.
- DIMENSION H DOES NOT INCLUDE DAMBAR PROTRUSION OR INTRUSION. THE DAMBAR PROTRUSION(S) SHALL NOT CAUSE THE H DIMENSION TO BE GREATER THAN 0.037 (0.940). THE DAMBAR INTRUSION(S) SHALL NOT CAUSE THE H DIMENSION TO BE SMALLER THAN 0.025 (0.635).

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.485	0.495	12.32	12.57
B	0.485	0.495	12.32	12.57
C	0.165	0.180	4.20	4.57
E	0.090	0.110	2.29	2.79
F	0.013	0.019	0.33	0.48
G	0.050 BSC		1.27 BSC	
H	0.026	0.032	0.66	0.81
J	0.020	—	0.51	—
K	0.025	—	0.64	—
R	0.450	0.456	11.43	11.58
U	0.450	0.456	11.43	11.58
V	0.042	0.048	1.07	1.21
W	0.042	0.048	1.07	1.21
X	0.042	0.056	1.07	1.42
Y	—	0.020	—	0.50
Z	2°	10°	2°	10°
G1	0.410	0.430	10.42	10.92
K1	0.040	—	1.02	—

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