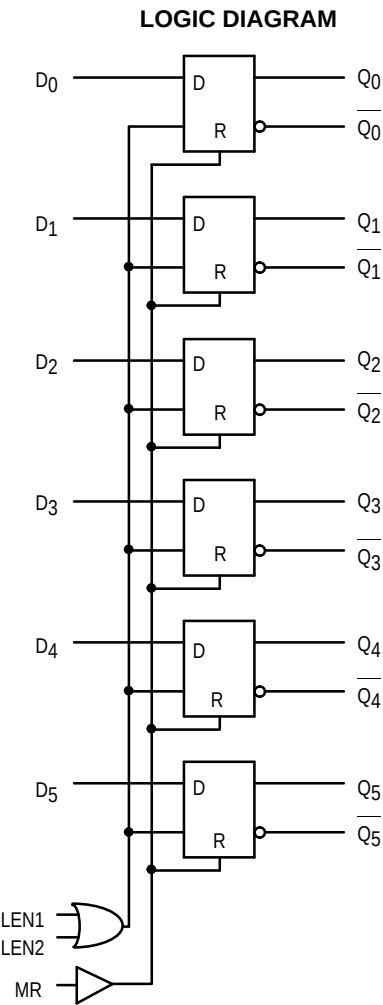


6-Bit D Latch

The MC10E100E150 contains six D-type latches with differential outputs. When both Latch Enables (LEN1, LEN2) are LOW, the latch is transparent and input data transitions propagate through to the output. A logic HIGH on either LEN1 or LEN2 (or both) latches the data. The Master Reset (MR) overrides all other controls to set the Q outputs low.

- 800ps Max. Propagation Delay
- Extended 100E V_{EE} Range of – 4.2V to – 5.46V
- 75kΩ Input Pulldown Resistors

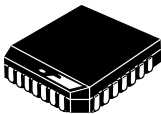


PIN NAMES

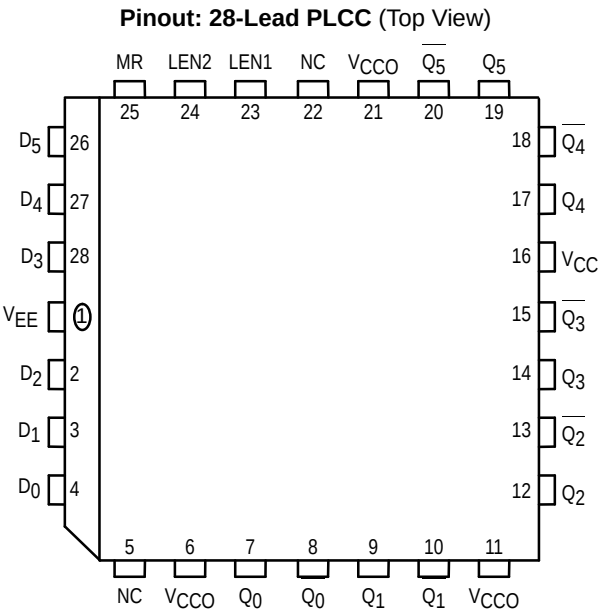
Pin	Function
D ₀ – D ₅	Data Inputs
LEN1, LEN2	Latch Enables
MR	Master Reset
Q ₀ – Q ₅	True Outputs
Q ₀ – Q ₅	Inverting Outputs

MC10E150
MC100E150

6-BIT D LATCH



FN SUFFIX
PLASTIC PACKAGE
CASE 776-02



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



MC10E150 MC100E150

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 LEN, MR			200 150			200 150			200 150	μA	
I_{EE}	Power Supply Current 10E 100E		52	62		52	62		52	62	mA	
			52	62		52	62		60	72		

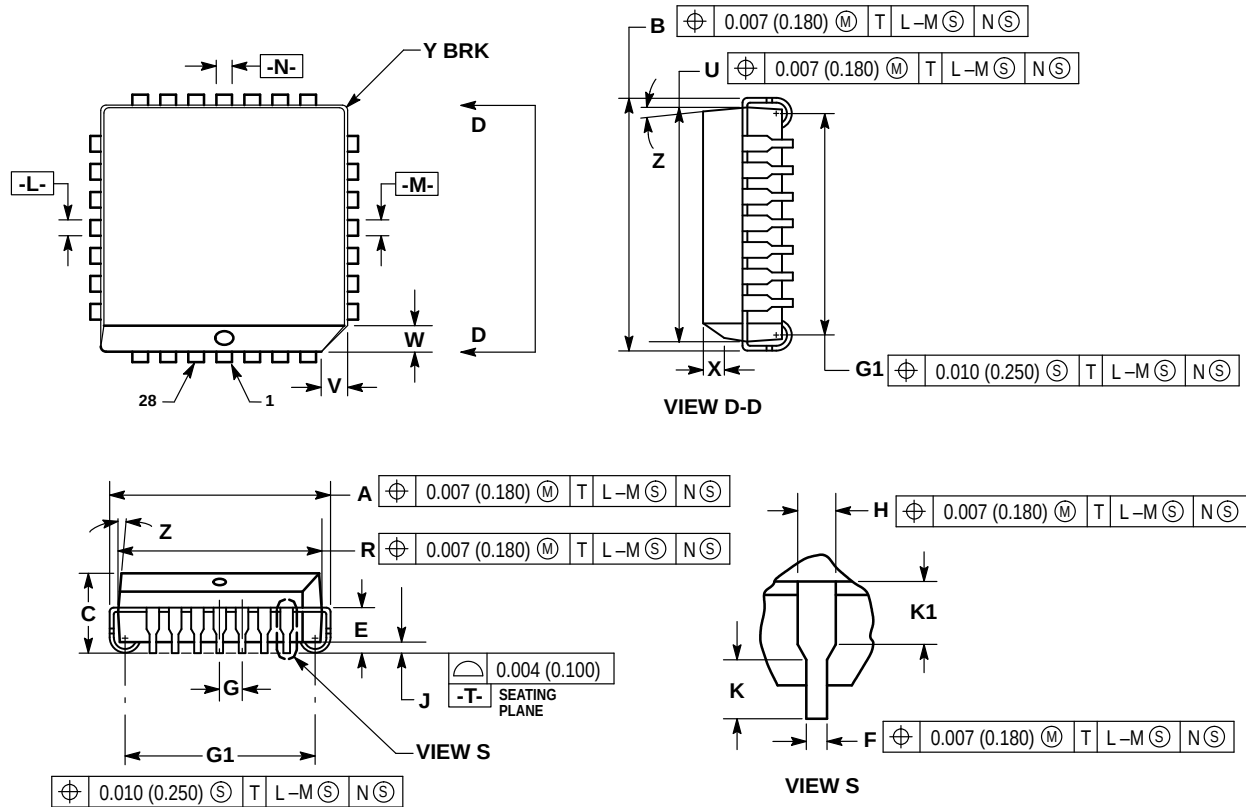
AC CHARACTERISTICS ($V_{EE} = V_{EE(min)}$ to $V_{EE(max)}$; $V_{CC} = V_{CCO} = GND$)

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 LEN MR	250 375 450	375 500 625	550 700 750	250 375 450	375 500 625	550 700 750	250 375 450	375 500 625	550 700 750	ps	
t_s	Setup Time D	200	50		200	50		200	50		ps	
t_h	Hold Time D	200	– 50		200	– 50		200	– 50		ps	
t_{RR}	Reset Recovery Time	750	650		750	650		750	650		ps	ps
t_{PW}	Minimum Pulse Width MR	400			400			400			ps	
t_{SKEW}	Within-Device Skew		50			50			50		ps	1
t_r t_f	Rise/Fall Times 20 - 80%	300	450	650	300	450	650	300	450	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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