

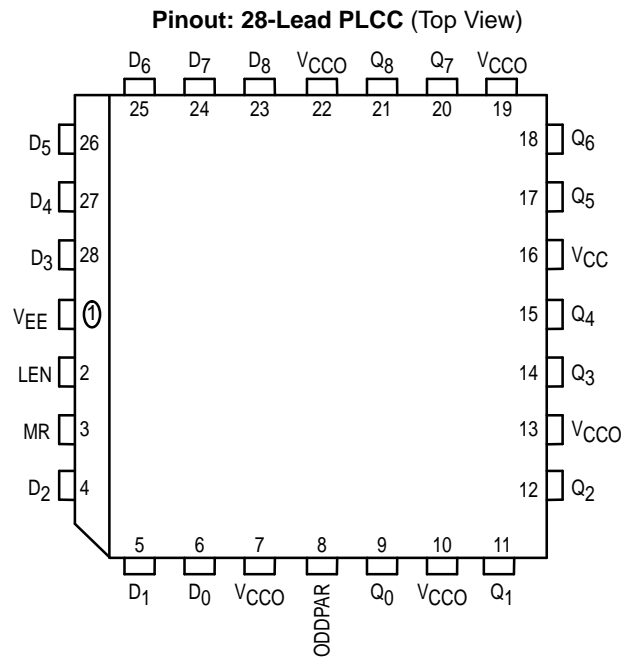
9-Bit Latch With Parity

The MC10E/100E175 is a 9-bit latch. It also features a tenth latched output, ODDPAR, which is formed as the odd parity of the nine data inputs (ODDPAR is HIGH if an odd number of the inputs are HIGH).

The E175 can also be used to generate byte parity by using D8 as the parity-type select (L = even parity, H = odd parity), and using ODDPAR as the byte parity output.

The LEN pin latches the data when asserted with a logical high and makes the latch transparent when placed at a logic low level.

- 9-Bit Latch
- Parity Detection/Generation
- 800ps Max. D to Output
- Reset
- Extended 100E V_{EE} Range of – 4.2V to – 5.46V
- Internal 75kΩ Input Pulldown Resistors



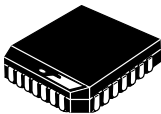
* All V_{CC} and V_{CCO} pins are tied together on the die.

PIN NAMES

Pin	Function
D ₀ – D ₈	Data Inputs
LEN	Latch Enable
MR	Master Reset
Q ₀ – Q ₈	Data Outputs
ODDPAR	Parity Output

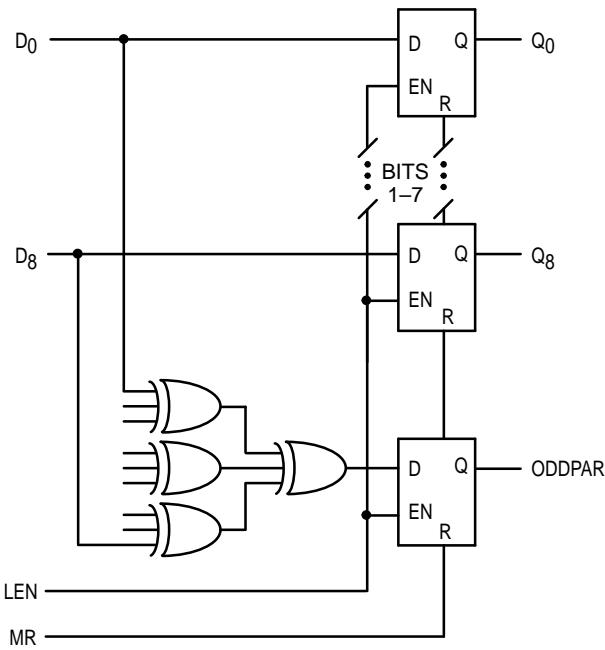
MC10E175
MC100E175

9-BIT LATCH
WITH PARITY



FN SUFFIX
PLASTIC PACKAGE
CASE 776-02

LOGIC DIAGRAM



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

Symbol	Characteristic	0°C			25°C			85°C			Unit	Cond
		min	typ	max	min	typ	max	min	typ	max		
I_{IH}	Input HIGH Current			150			150			150	μA	
I_{EE}	Power Supply Current										mA	
	10E		110	132		110	132		110	132		
	100E		110	132		110	132		127	152		

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

Symbol	Characteristic	0°C			25°C			85°C			Unit	Cond
		min	typ	max	min	typ	max	min	typ	max		
t_{PLH} t_{PHL}	Propagation Delay to Output D to Q D to ODDPAR LEN to Q LEN to ODDPAR MR to Q(t_{PHL}) MR to ODDPAR(t_{PHL})	450 850 525 525 525 525	600 1150 700 700 700 700	800 1450 900 900 900 900	450 850 525 525 525 525	600 1150 700 700 700 700	800 1450 900 900 900 900	450 850 525 525 525 525	600 1150 700 700 700 700	800 1450 900 900 900 900	ps	
t_s	Setup Time D (Q) D (ODDPAR)	275 900	100 700		275 900			275 900			ps	
t_h	Hold Time D (Q) D (ODDPAR)	175 -300	-100 -70		175 -300			175 -300			ps	
t_{RR}	Reset Recovery Time	850	600		850	600		850	600		ps	
t_{SKEW}	Within-Device Skew LEN, MR D to Q D to ODDPAR		75 75 200			75 75 200			75 75 200		ps	1
t_r t_f	Rise/Fall Times 20 - 80%	300	500	800	300	500	800	300	500	800	ps	

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

FUNCTION TABLE

D	EN	MR	Q	ODDPAR
H	L	L	H	H if odd no. of Dn HIGH
L	L	L	L	H if odd no. of Dn HIGH
X	H	L	Q_0	Q_0
X	X	H	L	L

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°	
G1	0.410	0.430	10.42	10.92
K1	0.040	—	1.02	—

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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

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

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

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



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