



MOTOROLA

MC3482A / MC6882A MC3482B / MC6882B

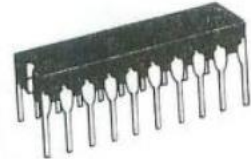
This device may be ordered under either of the above type numbers.

OCTAL THREE-STATE BUFFER/LATCH

This series of devices combines four features usually found desirable in bus-oriented systems: 1) High impedance logic inputs insure that these devices do not seriously load the bus; 2) Three-state logic configuration allows buffers not being utilized to be effectively removed from the bus; 3) Schottky technology allows for high-speed operation; 4) 48 mA drive capability.

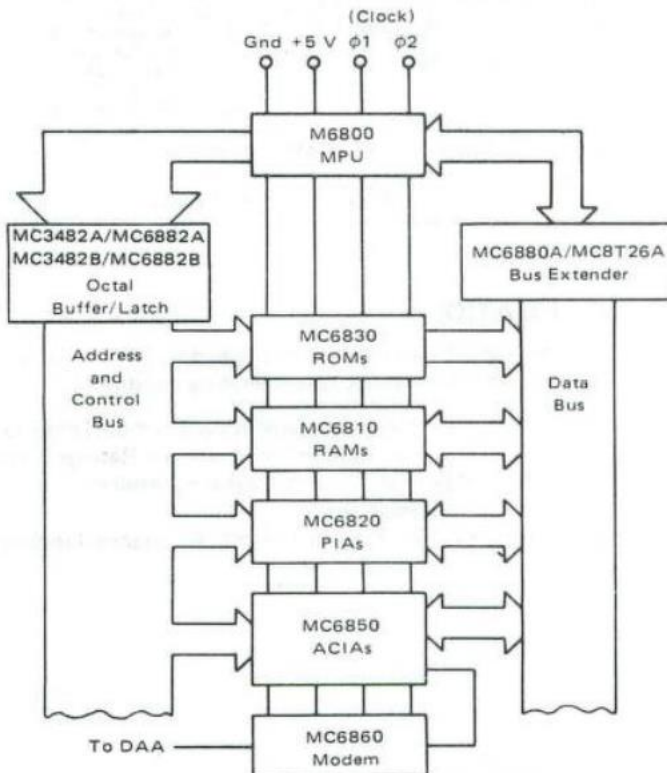
- Inverting and Non-Inverting Options of Data
- SN74S373 Function Pinouts
- Eight Transparent Latches/Buffers in a Single Package
- Full Parallel-Access for Loading and Reloading
- Buffered Control Inputs
- All Inputs Have Hysteresis to Improve Noise Rejection
- High Speed – 8.0 ns (Typ)
- Three-State Logic Configuration
- Single +5 V Power Supply Requirement
- Compatible with 74S Logic or M6800 Microprocessor Systems
- High Impedance PNP Inputs Assure Minimal Loading of the Bus

OCTAL THREE-STATE BUFFER/LATCH

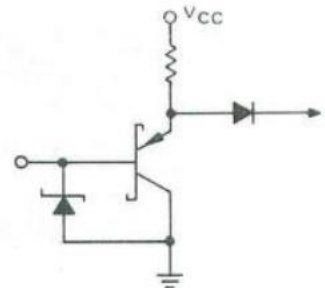


L SUFFIX
CASE 732

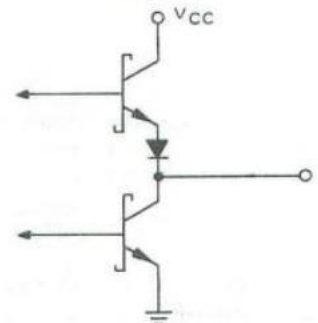
MICROPROCESSOR BUS EXTENDER APPLICATION



INPUT EQUIVALENT CIRCUIT



OUTPUT EQUIVALENT CIRCUIT



ORDERING INFORMATION

(Temperature Range for the following devices = 0 to +75°C.)

Device	Alternate	Package
MC3482AL	MC6882AL	Ceramic DIP
MC3482BL	MC6882BL	Ceramic DIP

MC3482A/MC6882A•MC3482B/MC6882B

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted.)

Rating	Symbol	Value	Unit
Power Supply Voltage	V _{CC}	8.0	Vdc
Input Voltage	V _I	5.5	Vdc
Operating Ambient Temperature Range	T _A	0 to +75	°C
Storage Temperature Range	T _{stg}	-65 to +150	°C
Operating Junction Temperature	T _J		°C
Ceramic Package		175	

ELECTRICAL CHARACTERISTICS (Unless otherwise noted, 0°C ≤ T_A ≤ 75°C and 4.75 V ≤ V_{CC} ≤ 5.25 V)

Characteristic	Symbol	Min	Typ	Max	Unit
Input Voltage – High Logic State (V _{CC} = 4.75 V, T _A = 25°C)	V _{IH}	2.0	–	–	V
Input Voltage – Low Logic State (V _{CC} = 4.75 V, T _A = 25°C)	V _{IL}	–	–	0.8	V
Input Current – High Logic State (V _{CC} = 5.25 V, V _{IH} = 2.4 V)	I _{IH}	–	–	40	μA
Input Current – Low Logic State (V _{CC} = 5.25 V, V _{IL} = 0.5 V, V _{IL} (\overline{OE}) = 0.5 V)	I _{IL}	–	–	-250	μA
Output Voltage – High Logic State (V _{CC} = 4.75 V, I _{OH} = -20 mA)	V _{OH}	2.4	–	–	V
Output Voltage – Low Logic State (I _{OL} = 48 mA)	V _{OL}	–	–	0.5	V
Output Current – High Impedance State (V _{CC} = 5.25 V, V _{OH} = 2.4 V) (V _{CC} = 5.25 V, V _{OL} = 0.5 V)	I _{OZ}	–	–	100 -100	μA
Output Short-Circuit Current (V _{CC} = 5.25 V, V _O = 0) (only one output can be shorted at a time)	I _{OS}	-30	-80	-130	mA
Power Supply Current (V _{CC} = 5.25 V)	MC3482A/MC6882A MC3482B/MC6882B I _{CC}	–	–	130 150	mA
Input Clamp Voltage (V _{CC} = 4.75 V, I _{IK} = -12 mA)	V _{IK}	–	–	-1.2	V

SWITCHING CHARACTERISTICS (V_{CC} = 5.0 V, 0°C ≤ T_A ≤ +75°C, unless otherwise noted, typical @ T_A = 25°C.)

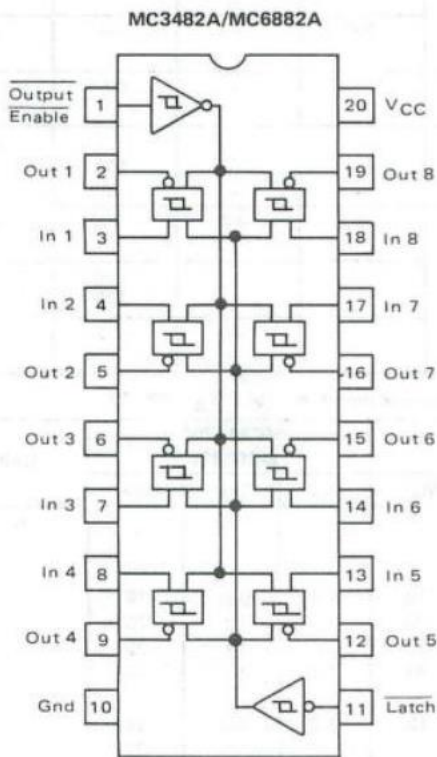
Characteristics	Symbol	MC3482A/ MC6882A			MC3482B/ MC6882B			Unit
		Min	Typ	Max	Min	Typ	Max	
Propagation Delay Times Data to Output Low to High C _L = 50 pF C _L = 250 pF C _L = 375 pF C _L = 500 pF High to Low C _L = 50 pF C _L = 250 pF C _L = 375 pF C _L = 500 pF	t _{PLH} (D) t _{PHL} (D)	4.0 – – 10	9.0 12 14 16	16 20 22 24	4.0 – – 10	9.0 12 14 16	16 20 22 24	ns
Propagation Delay Times Latch Disable (Low to High) to Output Low to High C _L = 50 pF High to Low C _L = 50 pF	t _{PLH} (L) t _{PHL} (L)	– –	22 23	30 30	– –	18 14	30 25	ns
Propagation Delay Times (C _L = 20 pF) High Output Level to High Impedance Low Output to High Impedance High Impedance to High Output High Impedance to Low Output	t _{PHZ} (\overline{OE}) t _{PLZ} (\overline{OE}) t _{PZH} (\overline{OE}) t _{PZL} (\overline{OE})	– – – –	8.0 20 9.0 13	15 27 16 20	– – – –	6.0 15 11 9.0	13 23 18 16	ns

MC3482A/MC6882A • MC3482B/MC6882B

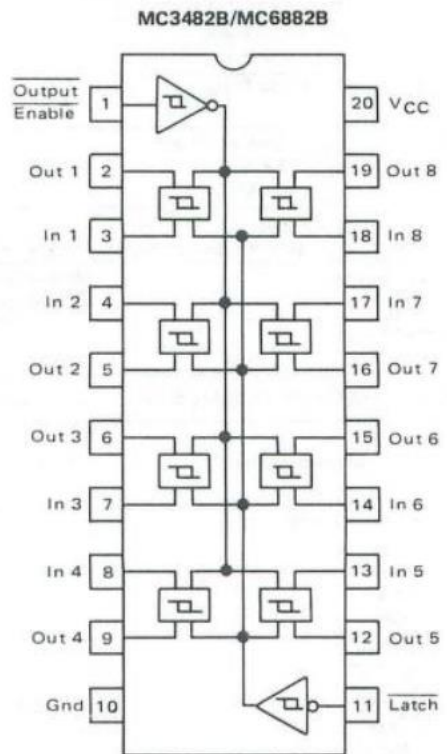
AC SETUP CHARACTERISTICS ($V_{CC} = 5.0\text{ V}$, $0^\circ\text{C} < T_A \leq +75^\circ\text{C}$, unless otherwise noted, typical @ $T_A = 25^\circ\text{C}$.)

Characteristic	Symbol	MC3482A/ MC6882A			MC3482B/ MC6882B			Unit
		Min	Typ	Max	Min	Typ	Max	
Setup Time (Data to Negative Going Latch Enable)	$t_{su}(D)$	10	0	—	7.0	0	—	ns
Hold Time (Data to Negative Going Latch Enable)	$t_h(D)$	10	—	—	8.0	—	—	ns
Minimum Latch Enable Pulse Width (High or Low)	$t_W(L)$	—	15	—	—	15	—	ns

PIN CONNECTIONS AND TRUTH TABLES



Output Enable	$\overline{\text{Latch}}$	Input	Output
0	1	0	1
0	1	1	0
0	0	X	Q_o
1	X	X	Z



Output Enable	$\overline{\text{Latch}}$	Input	Output
0	1	0	0
0	1	1	1
0	0	X	Q_o
1	X	X	Z

FIGURE 1 – TEST CIRCUIT FOR SWITCHING CHARACTERISTICS

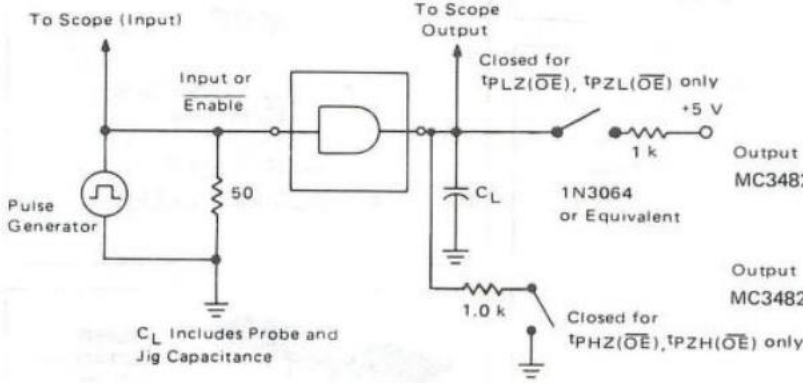


FIGURE 2 – WAVEFORMS FOR PROPAGATION DELAY TIMES DATA TO OUTPUT

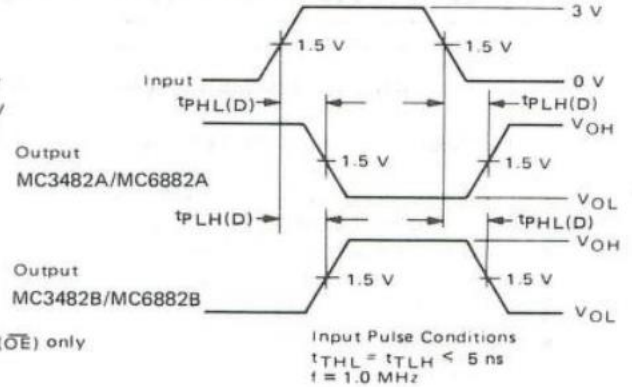
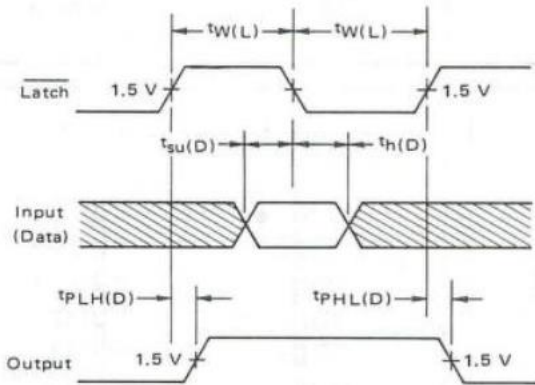


FIGURE 3 – WAVE FORMS FOR AC SETUP AND LATCH DISABLE TO OUTPUT DELAY



NOTES:

- LEADS WITHIN 0.25 mm (0.010) DIA. TRUE POSITION AT SEATING PLANE, AT MAXIMUM MATERIAL CONDITION.
- DIM L TO CENTER OF LEADS WHEN FORMED PARALLEL.
- DIM A AND B INCLUDES MENISCUS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	23.88	25.15	0.940	0.990
B	6.60	7.49	0.260	0.295
C	3.81	5.08	0.150	0.200
D	0.38	0.56	0.015	0.022
F	1.40	1.65	0.055	0.065
G	2.54 BSC		0.100 BSC	
H	0.51	1.27	0.020	0.050
J	0.20	0.30	0.008	0.012
K	3.18	4.06	0.125	0.160
L	7.62 BSC		0.300 BSC	
M	0°	15°	0°	15°
N	0.25	1.02	0.010	0.040

CASE 732-03

FIGURE 4 – WAVEFORMS FOR PROPAGATION DELAY TIMES – OUTPUT ENABLE TO OUTPUT

