

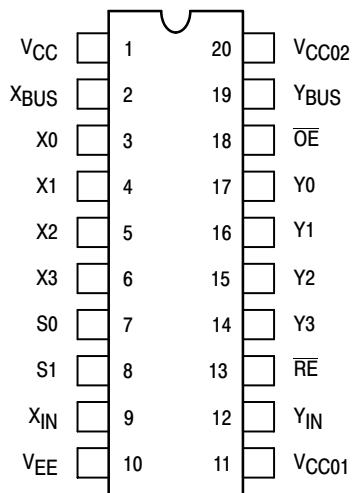
MC10H332

Dual Bus Driver/Receiver with 4-to-1 Output Multiplexers

The MC10H332 is a Dual Bus Driver/Receiver with four-to-one output multiplexers. These multiplexers have common selects and output enable. When disabled, ($\overline{OE} = \text{high}$) the bus outputs go to -2.0 V. The parameters specified are with $25\ \Omega$ loading on the bus drivers and $50\ \Omega$ loads on the receivers.

- Propagation Delay, 1.5 ns Typical Data-to-Output
- Improved Noise Margin 150 mV (Over Operating Voltage and Temperature Range)
- Voltage Compensated
- MECL 10K-Compatible

DIP & PLCC PIN ASSIGNMENT



Pin assignment is for Dual-in-Line Package.
For PLCC pin assignment, see the Pin Conversion Tables on page 18 of the ON Semiconductor MECL Data Book (DL122/D).

NOTE:

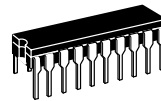
Each MECL 10H series circuit has been designed to meet the dc specifications shown in the test table, after thermal equilibrium has been established. The circuit is in a test socket or mounted on a printed circuit board and transverse air flow greater than 500 lfm is maintained. Receiver outputs are terminated through a 50-ohm resistor to -2.0 volts dc. Bus outputs are terminated through a 25-ohm resistor to -2.0 volts dc.



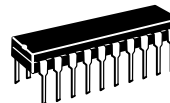
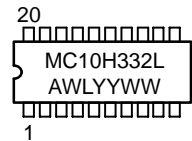
ON Semiconductor

<http://onsemi.com>

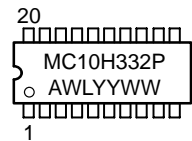
MARKING DIAGRAMS



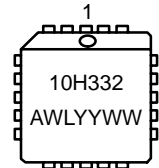
CDIP-20
L SUFFIX
CASE 732



PDIP-20
P SUFFIX
CASE 738



PLCC-20
FN SUFFIX
CASE 775



A = Assembly Location
WL = Wafer Lot
YY = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
MC10H332L	CDIP-20	18 Units/Rail
MC10H332P	PDIP-20	18 Units/Rail
MC10H332FN	PLCC-20	46 Units/Rail

MC10H332

MAXIMUM RATINGS

Symbol	Characteristic	Rating	Unit
V_{EE}	Power Supply ($V_{CC} = 0$)	-8.0 to 0	Vdc
V_I	Input Voltage ($V_{CC} = 0$)	0 to V_{EE}	Vdc
I_{out}	Output Current – Continuous – Surge	50 100	mA
T_A	Operating Temperature Range	0 to +75	°C
T_{stg}	Storage Temperature Range – Plastic – Ceramic	-55 to +150 -55 to +165	°C °C

ELECTRICAL CHARACTERISTICS ($V_{EE} = -5.2\text{ V} \pm 5\%$) (See Note 1.)

Symbol	Characteristic	0°		25°		75°		Unit
		Min	Max	Min	Max	Min	Max	
I_E	Power Supply Current	-	115	-	110	-	115	mA
I_{inH}	Input Current High Pins 3,4,5,6,14, 15,16,17 Pins 7,8 Pins 13, 18	-	667	-	417	-	417	μA
		-	437	-	273	-	273	
		-	456	-	285	-	285	
I_{inL}	Input Current Low	0.5	-	0.5	-	0.3	-	μA
V_{OH}	High Output Voltage	-1.02	-0.84	-0.98	-0.81	-0.92	-0.735	Vdc
V_{OL}	Low Output Voltage	-1.95	-1.63	-1.95	-1.63	-1.95	-1.60	Vdc
V_{IH}	High Input Voltage	-1.17	-0.84	-1.13	-0.81	-1.07	-0.735	Vdc
V_{IL}	Low Input Voltage	-1.95	-1.48	-1.95	-1.48	-1.95	-1.45	Vdc

AC PARAMETERS

t_{pd}	Propagation Delay Data-to-Bus Output	0.8	3.0	0.8	3.0	0.8	3.2	ns
	Select-to-Bus Output	0.8	3.4	0.8	3.4	0.8	3.8	
	$\overline{\text{OE}}$ -to-Bus Output	0.8	2.4	0.8	2.4	0.8	2.6	
	Bus-to-Receiver	0.8	2.1	0.8	2.1	0.8	2.4	
	Select-to-Receiver	1.8	4.5	1.8	4.5	1.8	5.0	
	$\overline{\text{RE}}$ -to-Receiver	0.8	2.2	0.8	2.2	0.8	2.5	
	Data-to-Receiver	1.3	4.0	1.3	4.0	1.3	4.5	
t_r	Rise Time	0.5	2.0	0.5	2.0	0.5	2.1	ns
t_f	Fall Time	0.5	2.0	0.5	2.0	0.5	2.1	ns

1. Each MECL 10H series circuit has been designed to meet the dc specifications shown in the test table, after thermal equilibrium has been established. The circuit is in a test socket or mounted on a printed circuit board and transverse air flow greater than 500 lfpm is maintained. Outputs are terminated through a 50-ohm resistor to -2.0 volts.

MC10H332

MULTIPLEXER TRUTH TABLE

OE	S1	S0	X _{Bus}	Y _{Bus}
H	X	X	-2.0V	-2.0V
L	L	L	X0	Y0
L	L	H	X1	Y1
L	H	L	X2	Y2
L	H	H	X3	Y3

RECEIVER TRUTH TABLE

RE	X _{in}	Y _{in}
H	L	L
L	X _{Bus}	Y _{Bus}

LOGIC DIAGRAM

