commodore semiconductor group

NMOS

MPS

65245

OCTAL BUS TRANSCEIVER WITH 3-STATE OUTPUTS

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DESCRIPTION

The 65245 is an octal bus transceiver designed for asynchronous, bi-directional communication between data busses.

The level of the Direction input (DIR) allows data transmission from bus A to bus B or from bus B to bus A. The Enable input ($\overline{E}$) can be used to provide isolation between the busses.

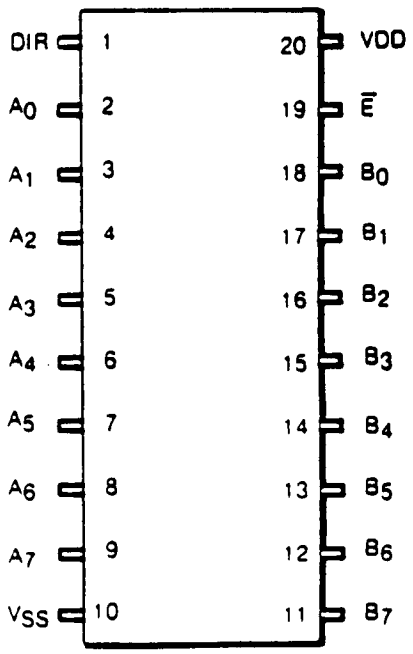
The device is fully TTL and CMOS compatible, and is pin-for-pin compatible with the 74LS245.

TRUTH TABLE

$\overline{E}$	DIR	OUTPUT
L	L	B data to A bus
L	H	A data to B bus
H	X	Isolation

L = LOW level
H = HIGH level
X = Irrelevant

PIN CONFIGURATION 65245



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
SUPPLY VOLTAGE	V_{CC}	−0.3 to +7.0	Vdc
INPUT VOLTAGE	V_{in}	−0.3 to +7.0	Vdc
OPERATING TEMPERATURE	T_A	0 to +70	°C
STORAGE TEMPERATURE	T_{STG}	−55 to +150	°C

This device contains circuitry to protect the inputs against damage due to high static voltages, however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this circuit.

ELECTRICAL CHARACTERISTICS (V_{CC} = 5.0V ± 5%, V_{SS} = 0, T_A = 0° to + 70°C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Input High Voltage	VIH	2.0	—	—	Vdc
Input Low Voltage	VIL	—	—	0.8	Vdc
Output High Voltage V_{CC}=MIN, VIH=2.0V IOH= −3mA IOH= −15mA	VOH	2.4 2.0	— —	— —	Vdc
Output Low Voltage V_{CC}=MIN, VIL = 0.8V IOL = 12mA IOL = 24mA	VOL	—	— —	0.4 0.5	Vdc
High-Impedance Output Current $\overline{E}$ = 2.0V, V_{CC} = MAX V_{out} = 2.7V	IOZH	—	—	50	µA
High-Impedance Output Current $\overline{E}$ = 2.0V, V_{CC} = MAX V_{out} = 0.4V	IOZL	—	—	−50	µA
High-Level Input Current V_{CC}=MAX, VIH = 2.7V	IIH	—	20	100	nA
Low-Level Input Current V_{CC} = MAX, VIL = 0.4V	IIL	—	20	−100	nA
High-Level Output Current V_{CC}=NOM, V_{out} = 2.4V	IOH	—	—	−15	mA
Low-Level Output Current V_{CC} = NOM V_{out} = 0.4V	IOL	—	—	24	mA
Power Supply Current Outputs High Outputs Low Outputs Hi-Z	ICC	—	47 44 56	64 100 105	mA

AC CHARACTERISTICS (VCC=5.0V, VSS=0V, T_A=+25°C)

CHARACTERISTIC	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Propagation Delay Data to Output	TPLH TPHL	SEE BELOW	— —	— —	40 40	ns ns
Output Enable Time	TPZH TPZL		— —	— —	40 40	ns ns
Output Disable Time	TPHZ TPLZ		— —	— —	40 40	ns ns