

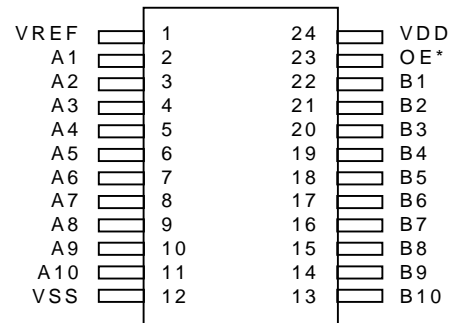
10-bit Bus Switch

FEATURES

- Enable Signal is SSTL_2 Compatible.
- Optimized for Use in DDR SDRAM Applications.
- Flow-through Architecture Optimizes PCB Layout.
- Designed to be Used With 200Mbps.
- Switch on Resistance is Designed to Eliminate the Need for Series Resistor to DDR SDRAM.
- Internal 10-KΩ Pull-down on Output Enable Input.
- Full DDR Solution Provided When Used With CB857 and STL16857.

PIN ASSIGNMENT

24-Pin TSSOP Package



DESCRIPTION

This 10-bit FET bus switch is designed for 3V to 3.6V V_{dd} operation and SSTL_2 output enable (OE*) input levels. When OE* is LOW, the 10-bit bus switch is on and port A is connected to port B. When OE* is HIGH, the switch is open, and a high-impedance state exists between the two ports. The low on-state resistance of the switch allows connections to be made with minimal propagation delay. The BS3857 is characterized for operation from 0°C to 85°C.

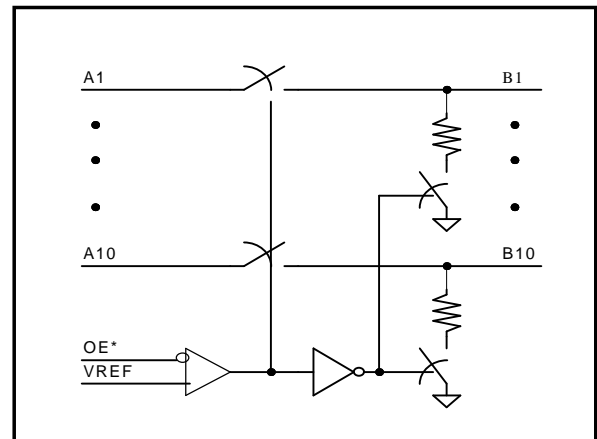


FIG. 1. FUNCTIONAL BLOCK DIAGRAM

PIN DESCRIPTION

PIN	SYMBOL	DESCRIPTION
1	VREF	Vref input
2, 3, 4, 5, 6, 7, 8, 9, 10, 11	A1-A10	Port Inputs
12	VSS	Ground
22, 21, 20, 19, 18, 17, 16, 15, 14, 13	B1-B10	Port Outputs, 10KΩ termination when Off.
23	OE*	Output Enable, Switch is on when Low
24	VDD	Positive supply voltage

FUNCTION TABLE

OE*	Mode
L	Port A = Port B
H	Port A high impedance Port B 10KΩ pull-down

Notes:
H= Logic High, L= Logic Low

RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTES
Supply Voltage	Vdd	3.0	3.3	3.6	V	
Reference Voltage	Vref	1.15	1.25	1.35		Vref = 0.38xVdd
Operating Temperature	To	0		70	°C	

DC CHARACTERISTICS

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTES
Quiescent Current	Idd			1	mA	
Input Voltage Low	Vil	-0.5		Vref-0.18	V	OE*
Input Voltage High	Vih	Vref+0.18		Vddq+0.5	V	OE*
Input Current	Ii			±5	uA	Any input
On Resistance	Ron	20		30	Ω	Port A to B
Off Resistance	Roff	1			MΩ	Port A

AC CHARACTERISTICS

(Cl=30pF; 0°C to 70°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	NOTES
Propagation Delay	Tp			750	pS	Port A to B Port B to A OE* to Port A & B
		1		3		
Input Capacitance	Cin	2		4	pF	Port A or B

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