

QS316384, QS3162384



High Speed CMOS  
20-bit Bus Switches  
in VSOP

QS316384  
QS3162384  
Preliminary

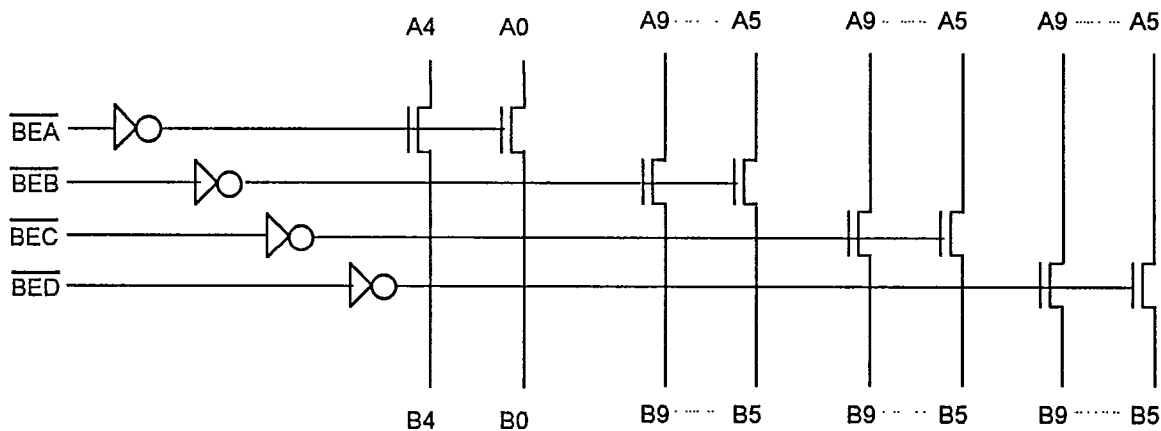
FEATURES/BENEFITS

- 5Ω switches connect inputs to outputs
- Direct bus connection when switches on
- Zero propagation delay
- Undershoot clamp diodes on all inputs
- AC compatible with the QS3384 and QS32384
- 3162384 is 25Ω version for low noise
- Four enables control 5 bits each
- Zero ground bounce in flow-through mode
- TTL-compatible input and output levels
- Available in 48-pin VSOP

DESCRIPTION

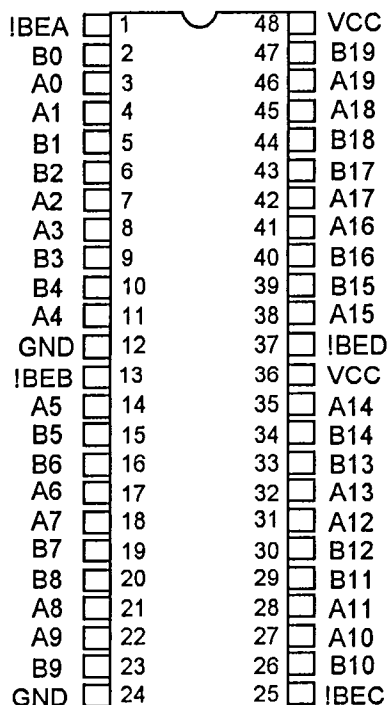
The QS316384 and QS3162384 each provide a set of ten high-speed CMOS TTL-compatible bus switches. The low on resistance of the QS316384 allows inputs to be connected to outputs without adding propagation delay and without generating additional ground bounce noise. The QS3162384 includes internal 25Ω series termination resistors to reduce reflection noise in high speed applications. The bus enable (IBE) signals turn the switches on. Four bus enable signals are provided, one for each of five bits of the 20-bit bus.

FUNCTIONAL BLOCK DIAGRAM



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**PIN CONFIGURATIONS**



**TOP VIEW**

**Pin Description**

Name	I/O	Function
A0-A19	I/O	Bus A
B0-B19	I/O	Bus B
!BEA/B/C/D	I	Bus Switch Enables

**Function Table**

!BEA	!BEB	!BEC	!BED	B0-4	B5-9	B10-14	B15-19	Function
H	H	H	H	Hi-Z	Hi-Z	Hi-Z	Hi-Z	disconnect
L	H	H	H	A0-A4	Hi-Z	Hi-Z	Hi-Z	nibble connect
H	L	H	H	Hi-Z	A5-A9	Hi-Z	Hi-Z	nibble connect
H	H	L	H	Hi-Z	Hi-Z	A10-A14	Hi-Z	nibble connect
H	H	H	L	Hi-Z	Hi-Z	Hi-Z	A15-A19	nibble connect
L	L	L	L	A0-A4	A5-A9	A10-A14	A15-A19	full connect