

128 Channel Serial to Parallel Converter with Push-Pull Outputs

Introduction

The Supertex HV583DB1 demo board contains all necessary circuitry to evaluate the features of the HV583, a 128 channel serial to parallel converter with high voltage push-pull outputs. The HV583 is available only in die form. Its inputs and outputs are wire-bonded to two dual-in-line edge connectors for ease of evaluation. Supply voltages and input logic signals are on the 30 pin connector, whereas all high voltage outputs are on the 128 pin connector. There are no other components on the demo board.

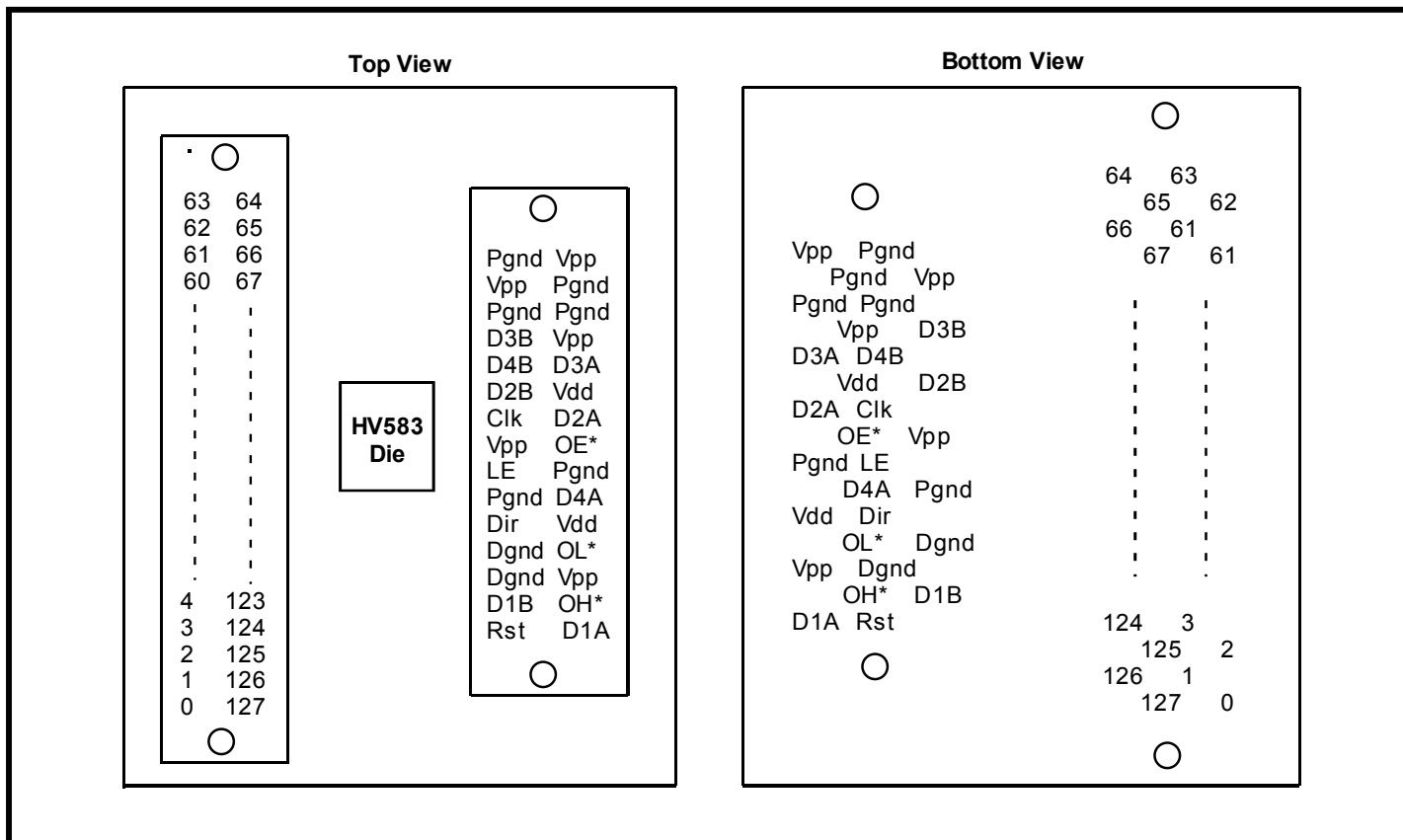
For detailed electrical performance, refer to the HV583 data sheet.

Operating Conditions

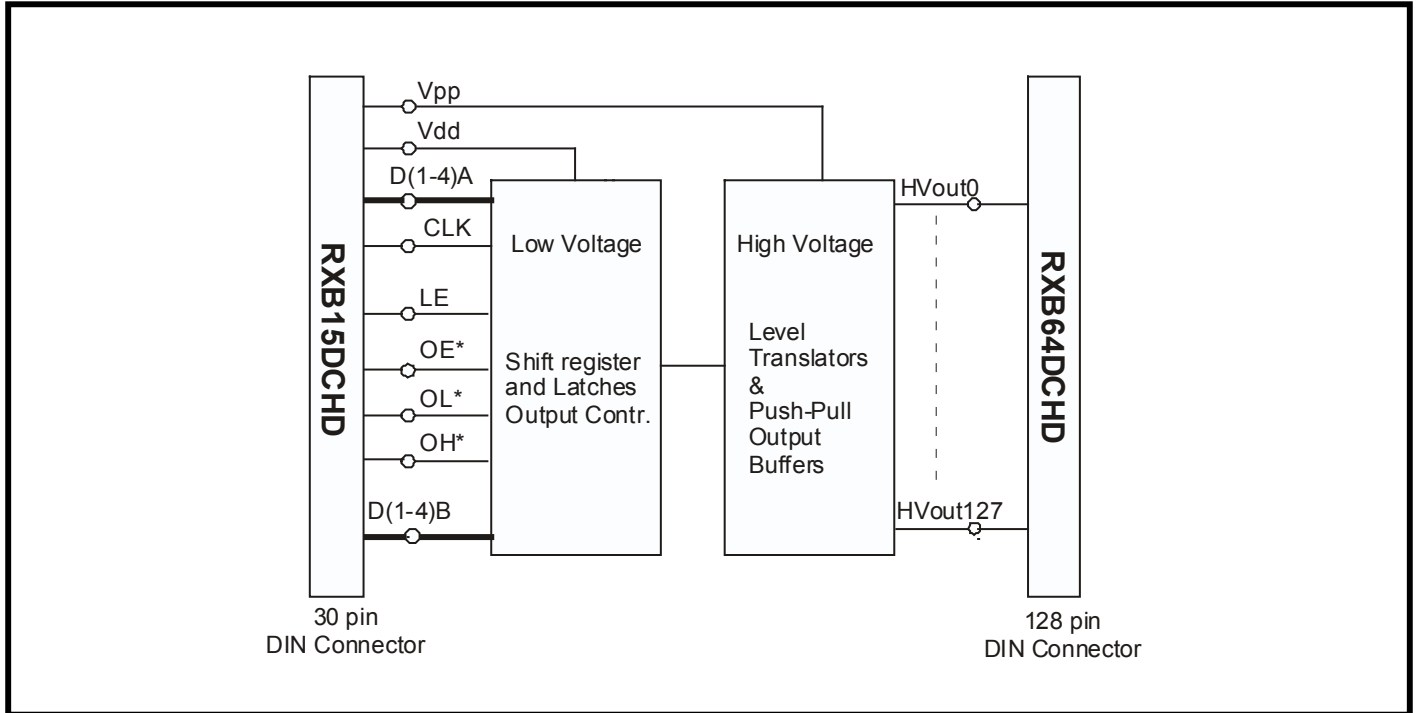
V _{PP} , High Voltage	15V to 80V
V _{DD} , Logic Voltage Supply	4.5V to 5.5V
Output peak current	±30mA
Clock Frequency	40MHz
Input logic levels	-0.5V to V _{DD} +0.5V

To minimize ground bounce, Supertex recommends adding an external series resistor between the power supply and the V_{PP} line.

Board Layout and Connections



Demo Board Diagram



Pin Description

Vpp	High voltage supply for outputs.
Vdd	Low voltage logic supply
D1A to D4A	Right data input/output. Input when Dir=H, Output when Dir=L.
D1B to D4B	Left data input/output. Input when Dir=L, Output when Dir=H.
Dir	Dir=L or open, S1 to S128 shift. Dir=H, S128 to S1 shift.
Clk	Clock input. Data shifted from low to high transition.
RST	Resets latches.
LE	Latch enable. Data latches during rising edge LE.
OE*	Output enable bar. HVout high impedance control.
OL*	Output low bar. HVout=low when this pin is low.
OH*	OH bar input.
DGND	Digital logic ground.
PGND	HVout output ground.
Hvout1 to HVout128	High voltage outputs.

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