



The EL5525I demo board is designed for demonstrating the operation of Intersil's high precision reference voltage generator, EL5525. For detail description, please refer to the data sheet. A parallel port Visual Basic program is used to drive the SDI, SCLK, ENA pins for the channel and voltage selection.

### 18 Channel Circuit Description

Please refer to the demo board circuit.. On the board,  $V_S$  is the supply voltage (5V to 16.5V).  $V_{SD}$  is the digital supply (3.3V to 5V). REFH is the high reference output voltage ( $REFL < REFH \leq V_S$ ). REFL is the low reference output voltage ( $0 \leq REFL < REFH$ ). In order to save power supplies, the REFH and REFL are generated from Intersil's EL5220IY amplifier. REFH can be adjusted by changing R18 and REFL can be adjusted by changing R19. By default setting, the R18 and R19 are set to have a 10V REFH and 1V REFL. The user can confirm the voltages by measuring the REFH and REFL pins on J1 and J2.

R20 to R26, R28 to R34 and R41 to R46 are 1.5K load resistors. C6, C12 and C18 are 0.1 $\mu$ F local bypass capacitors.

C1 to C5, C7, C8, C10, C12 to C15 and C26 to C31 are 180pF load capacitors. If bigger capacitors are required, then, a serial resistor (20 $\Omega$  to 100 $\Omega$ ) should be use between the output and the capacitor.

### Control Software

A Visual basic program is used to drive the parallel port to output the data stream for SDI and SCLK inputs. To install the software, just copy the EL5525.exe to your window desktop. If your operating system is win98, copy the files "ntport.dll and zntport.sys" to the directory: C:\windows\system. If your operating system is NT, Win2000 or WinXP, copy the files "ntport.dll, zntport.sys, comdlg32.ocx and tabctl32.ocx" to the directory: C:\winnt\system32.

### Demo Board Control (18 Channel)

Click the EL5525I.exe icon on your windows desktop, a control panel shows up. On the panel, you can set your reference high and reference low voltage. You can set the voltage for each channel. Click the SendAll or Send button and the data will be sent out through the parallel port.

### TEST SETUP

1. Apply a 15V to  $V_S$ , 5V to  $V_{SD}$  and ground to GND.
2. Confirm the voltages of REFH and REFL on J1 and J2. Adjust R18 until REFH = 10V and R19 until REFL = 1V.
3. Connect the parallel cable from the computer to the board.
4. Program and confirm the output voltages on each channel.

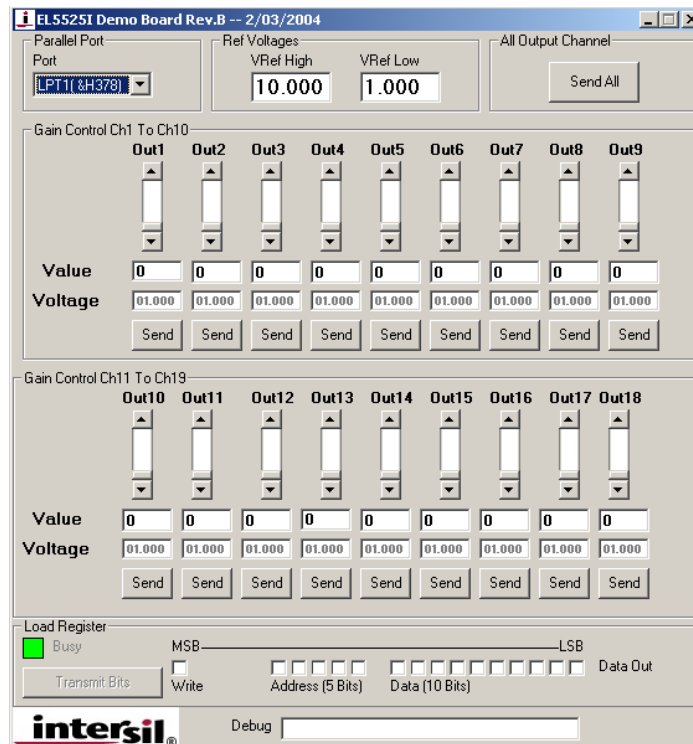


FIGURE 1.

# Schematics

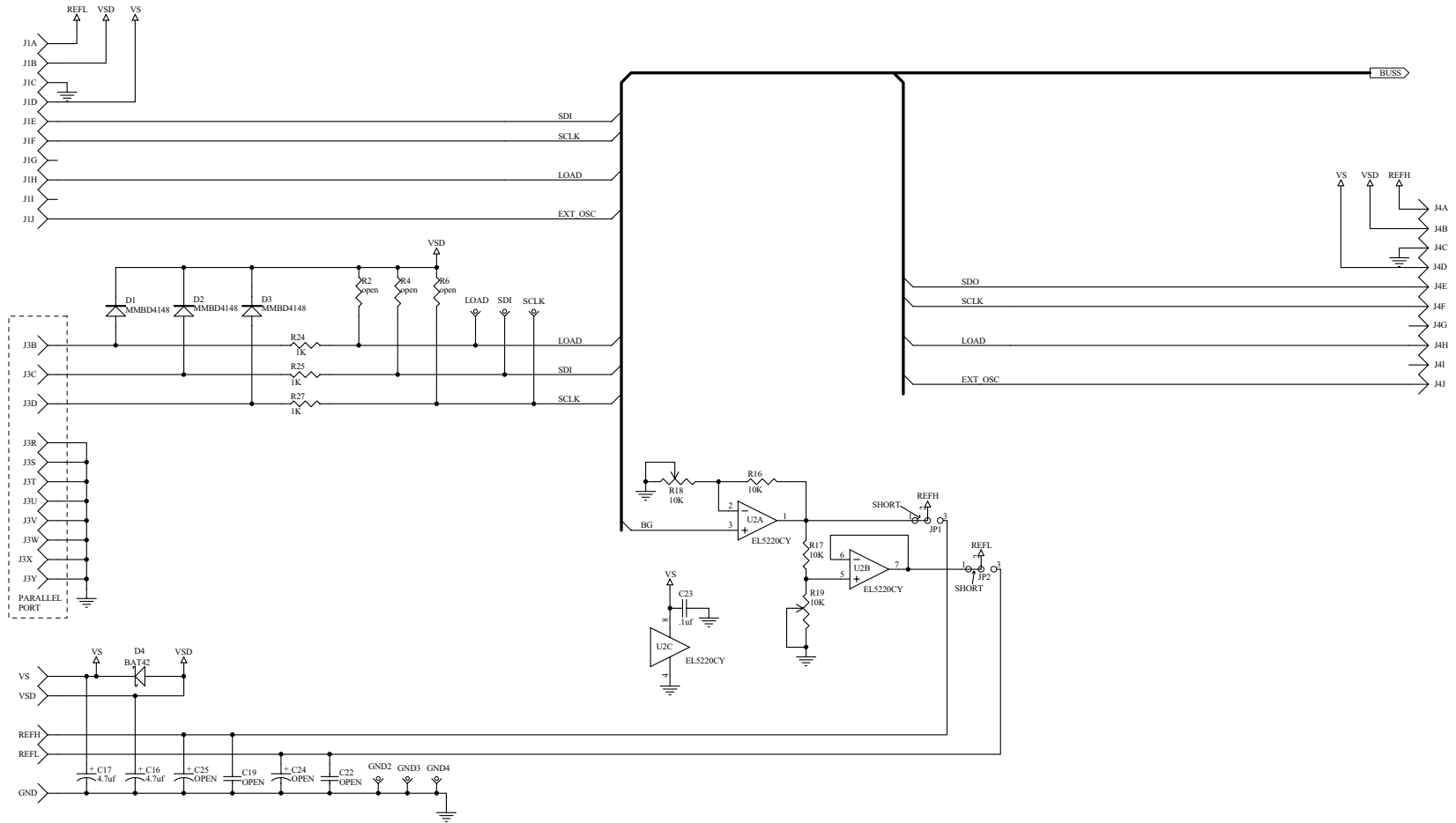


FIGURE 2.

Schematics (Continued)

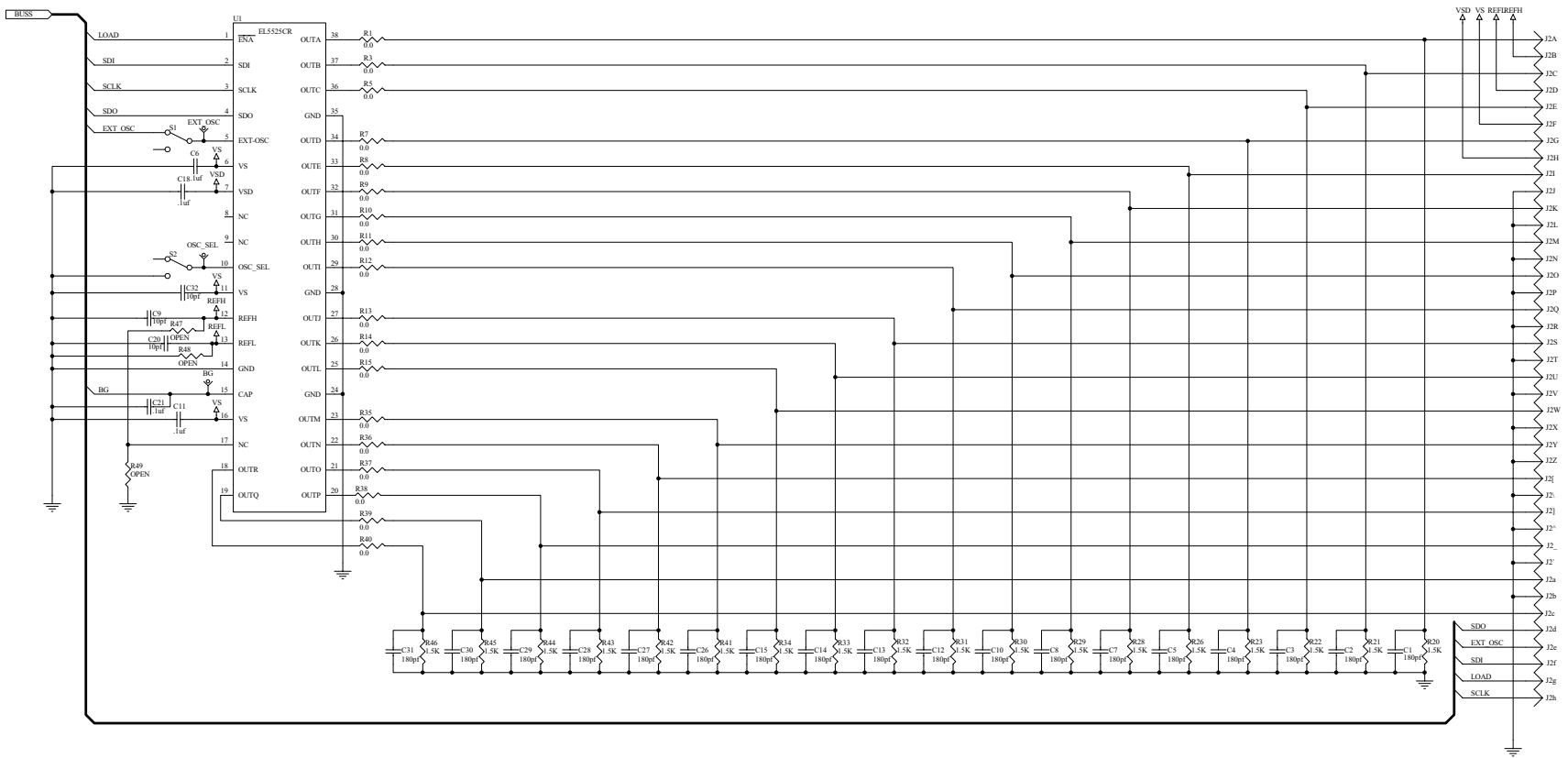


FIGURE 3.

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