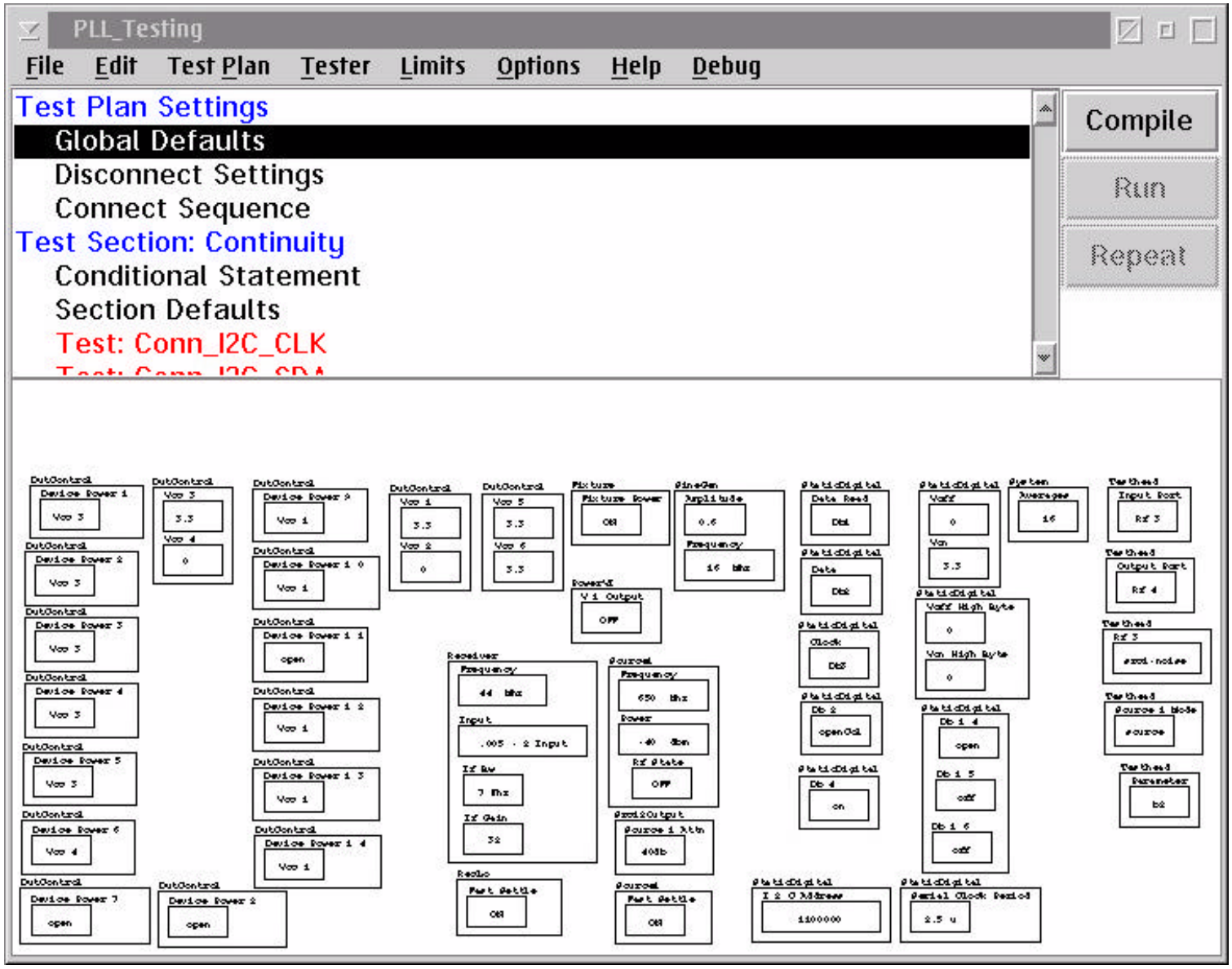
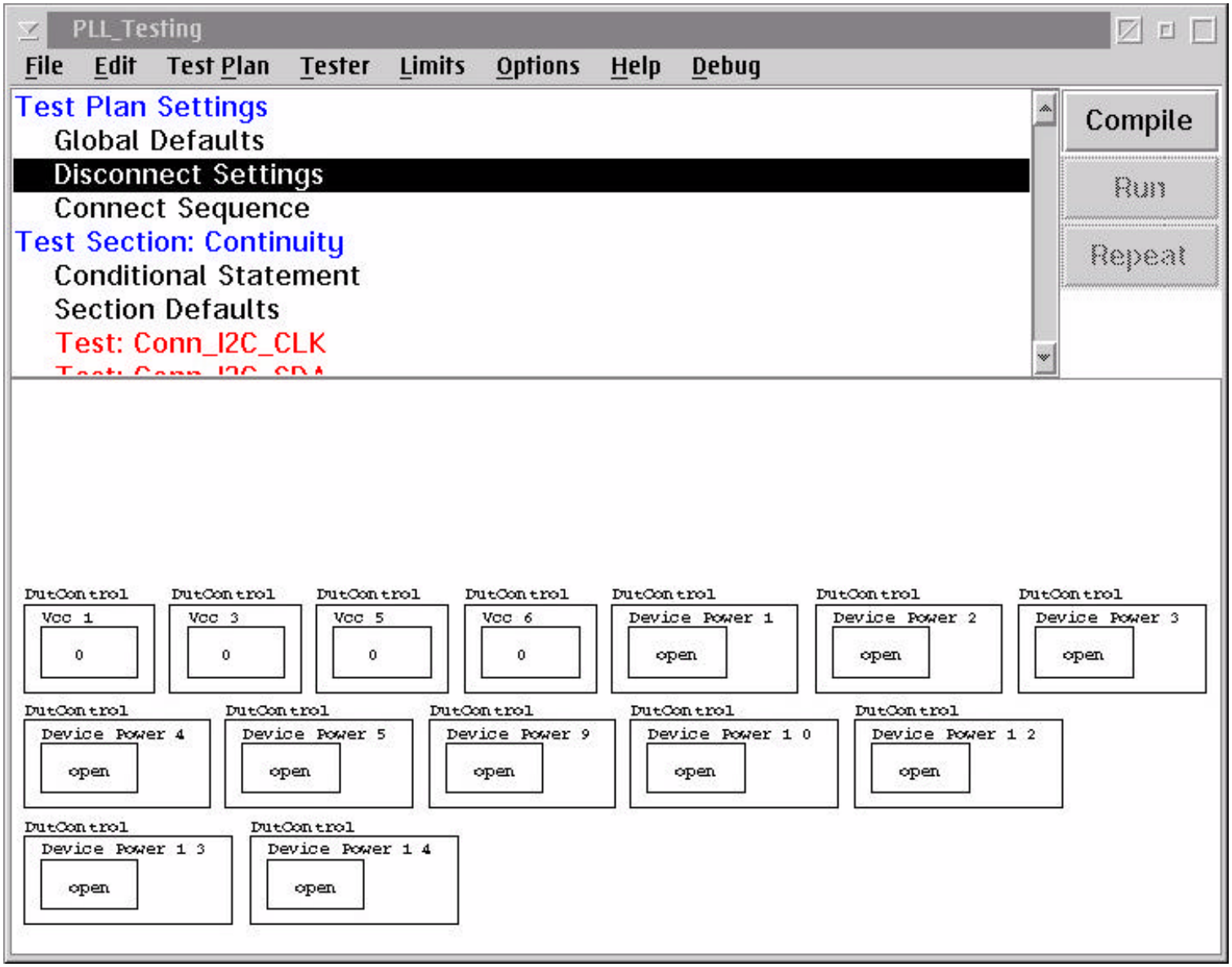
PLL Testing

- Test Conditions
- Measurements
- Calculations

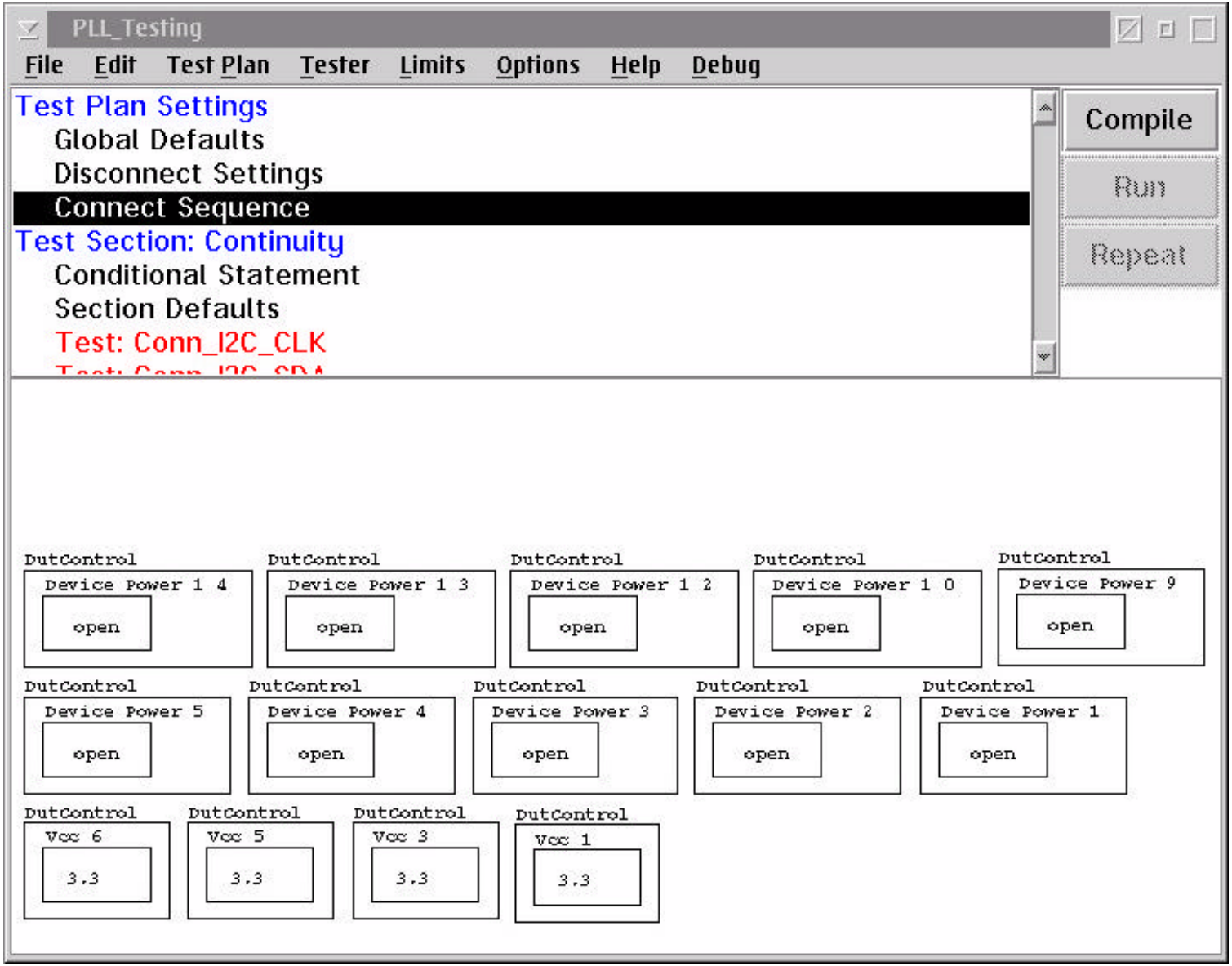
Global Default Settings



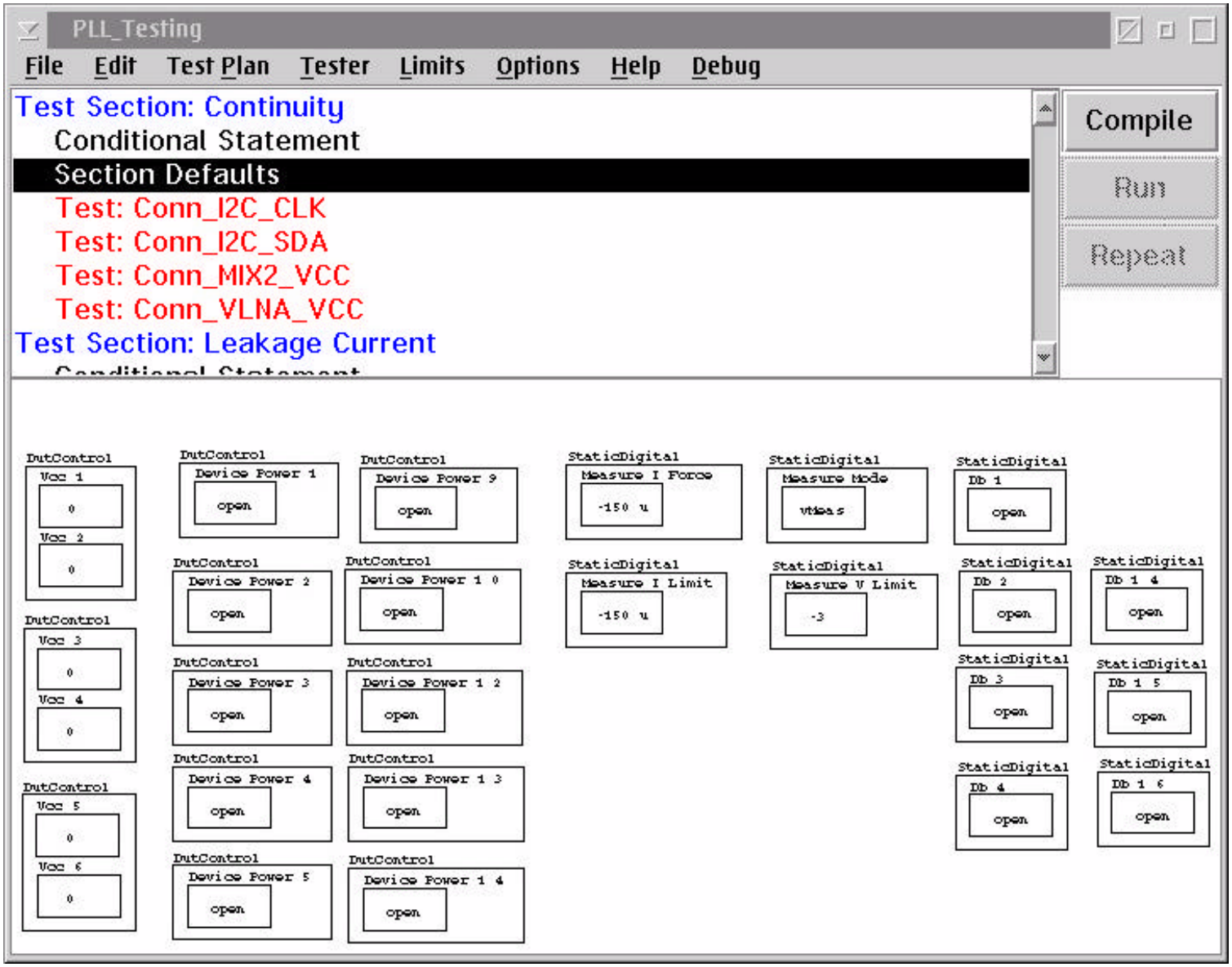
Disconnect Settings



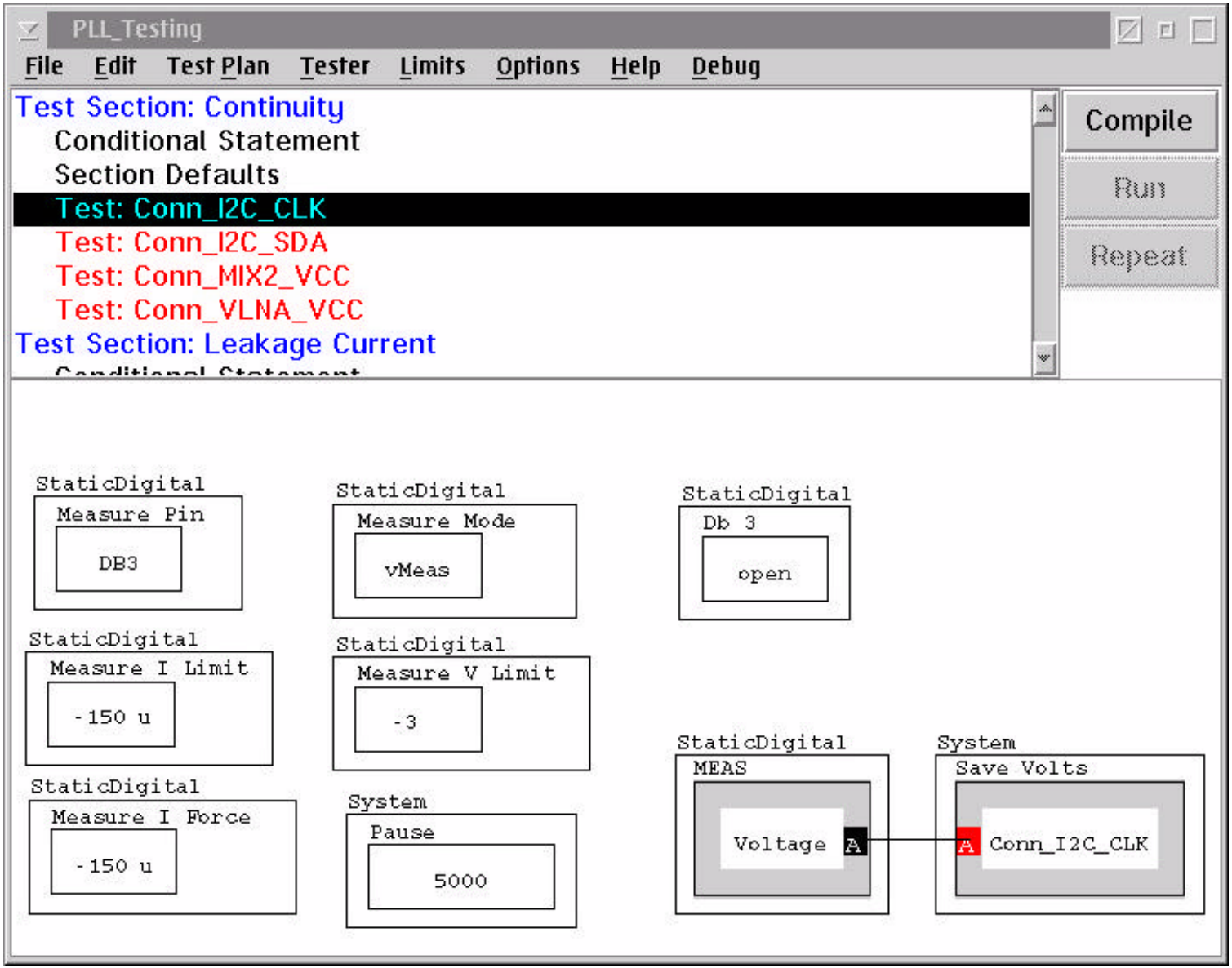
Connect Sequence



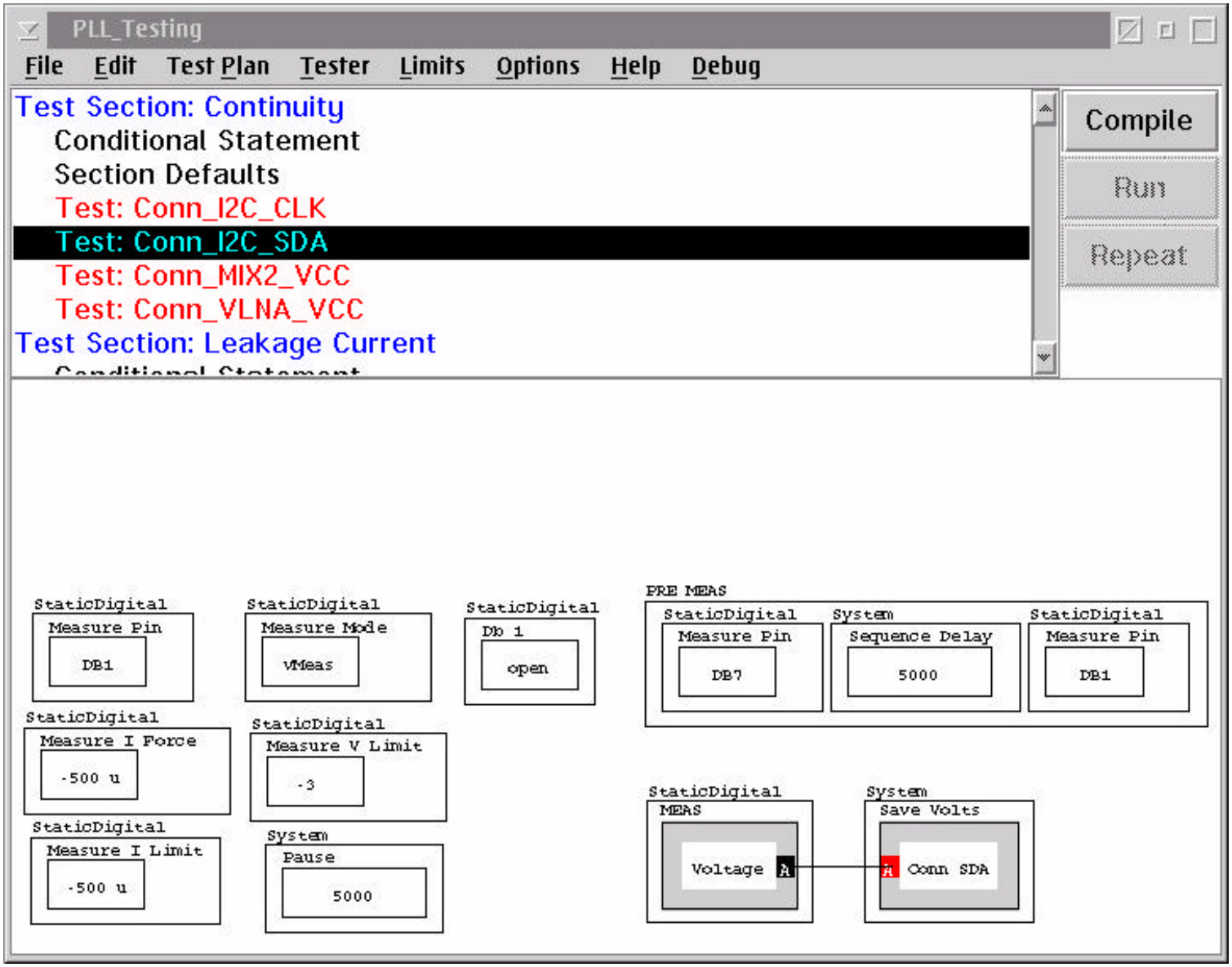
Continuity Tests, Section Defaults



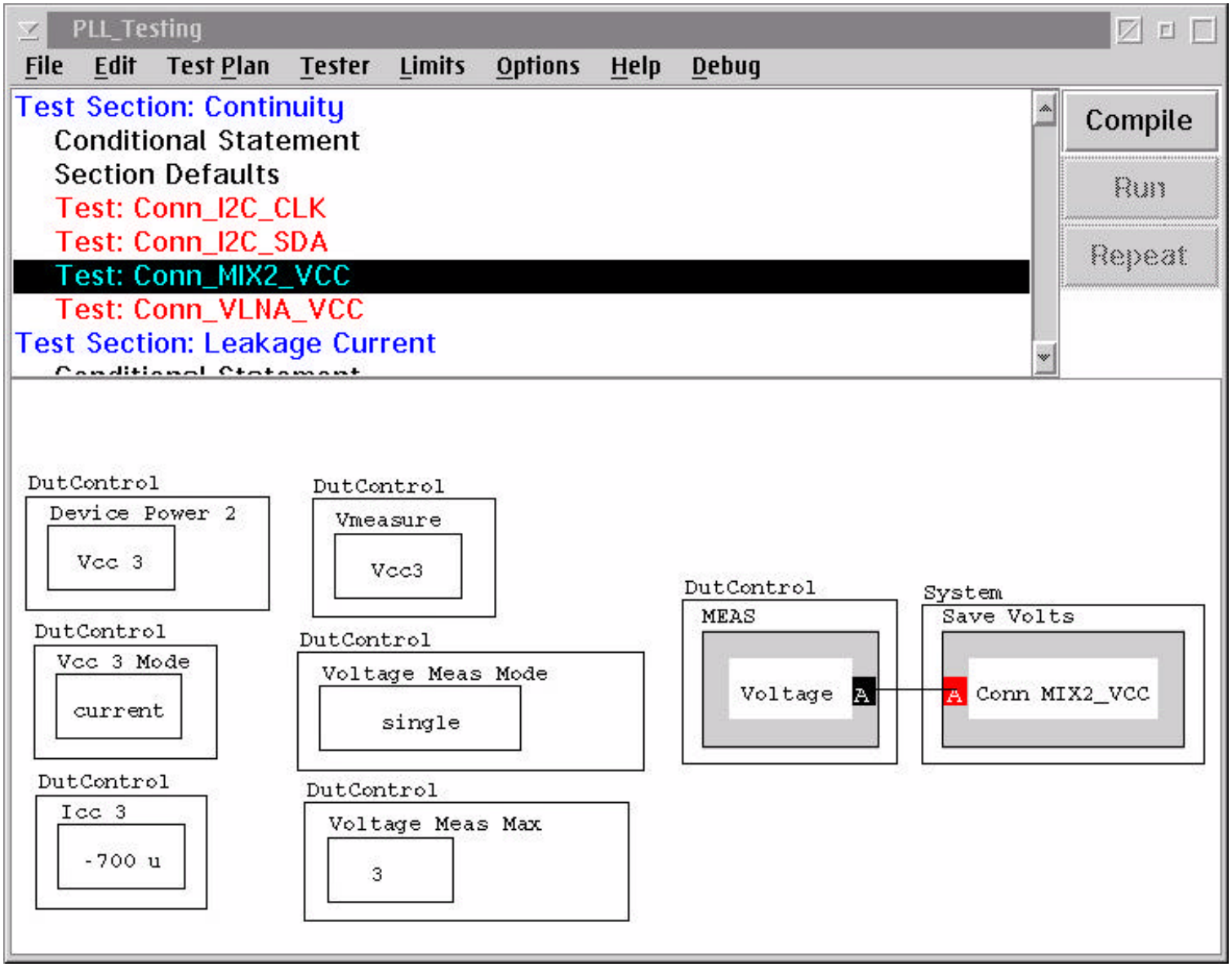
Continuity Test for Digital Line: I2C Clock



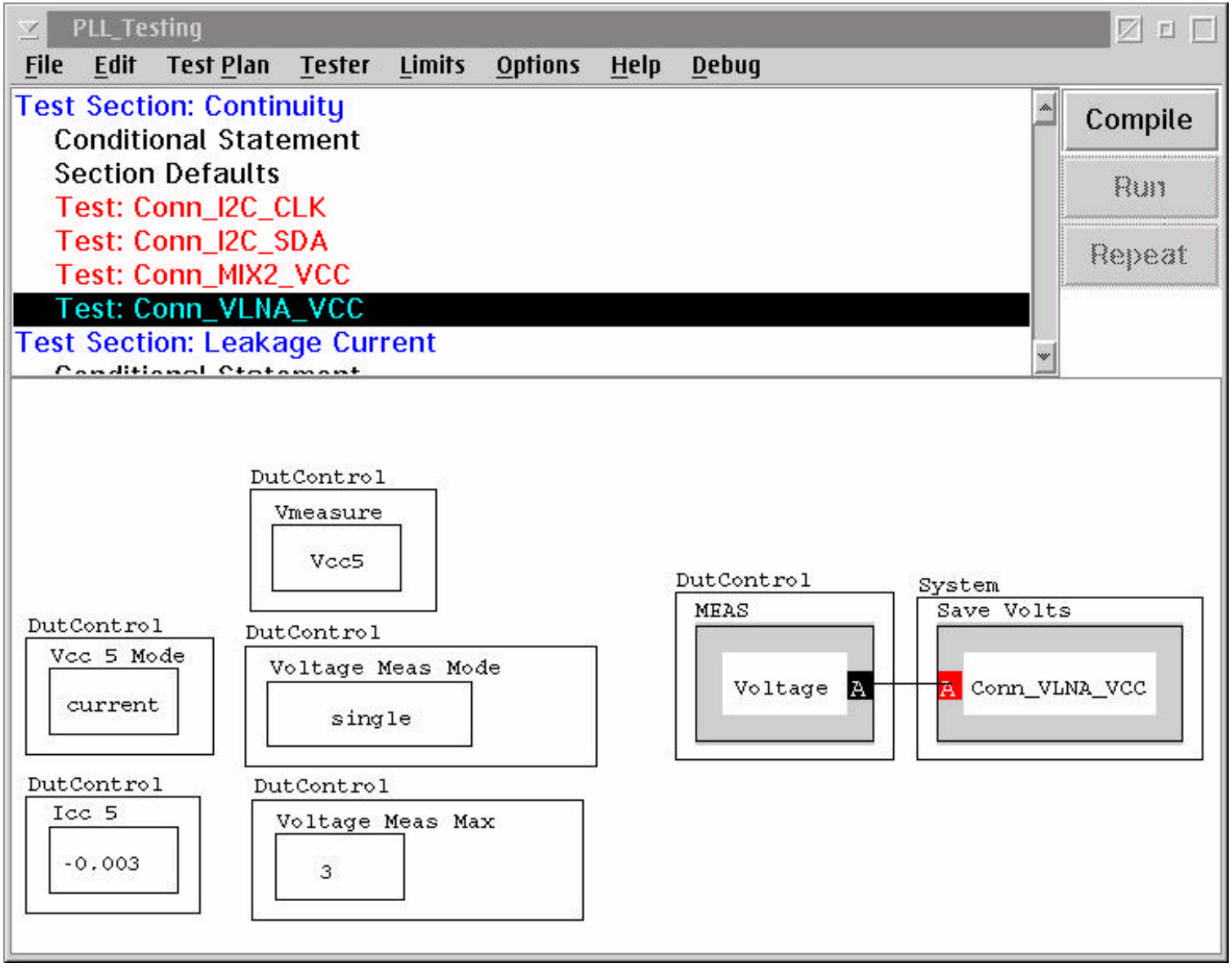
Continuity Test for Digital Line: I2C Data Read/Write



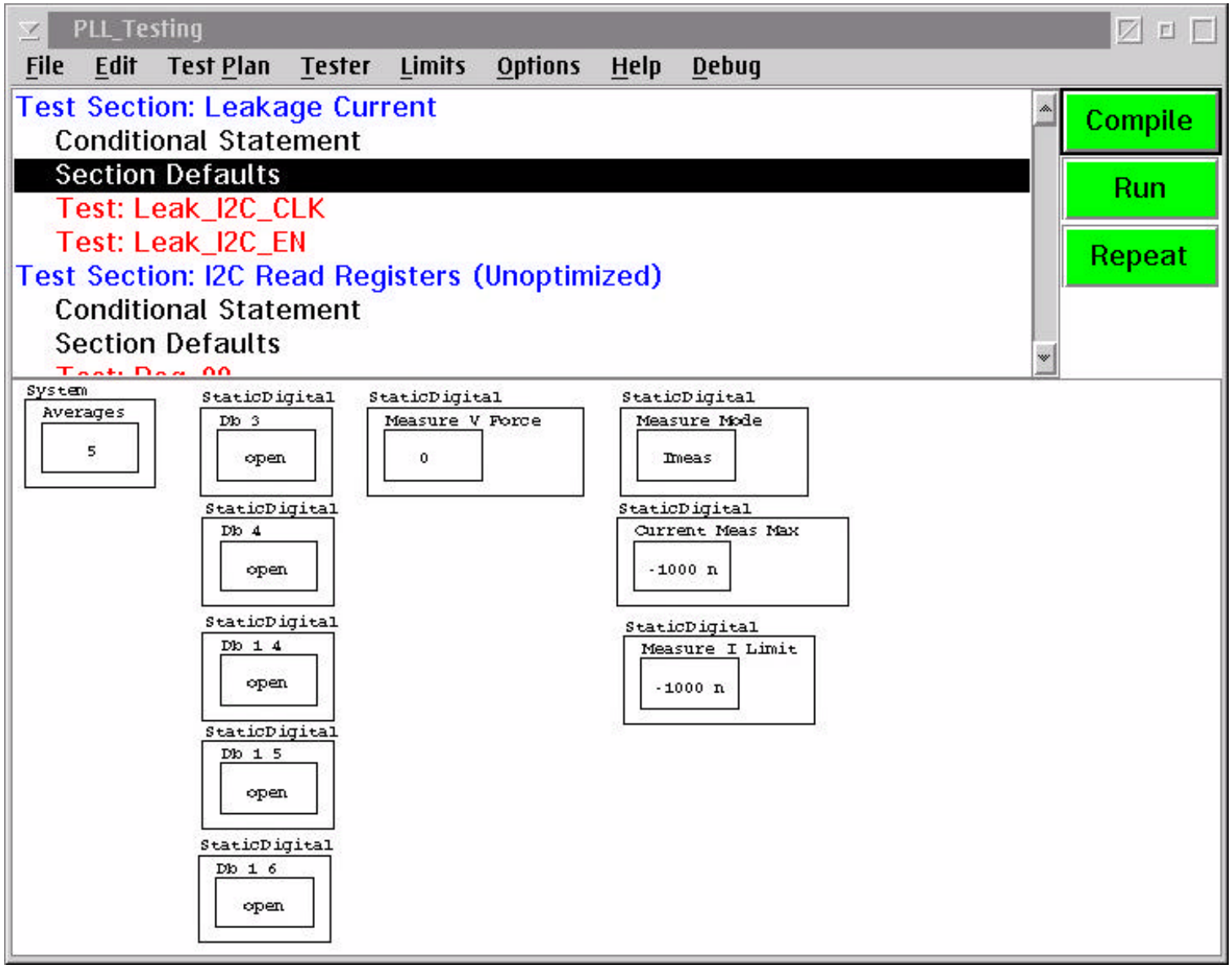
Continuity Test for Typical VCC Line



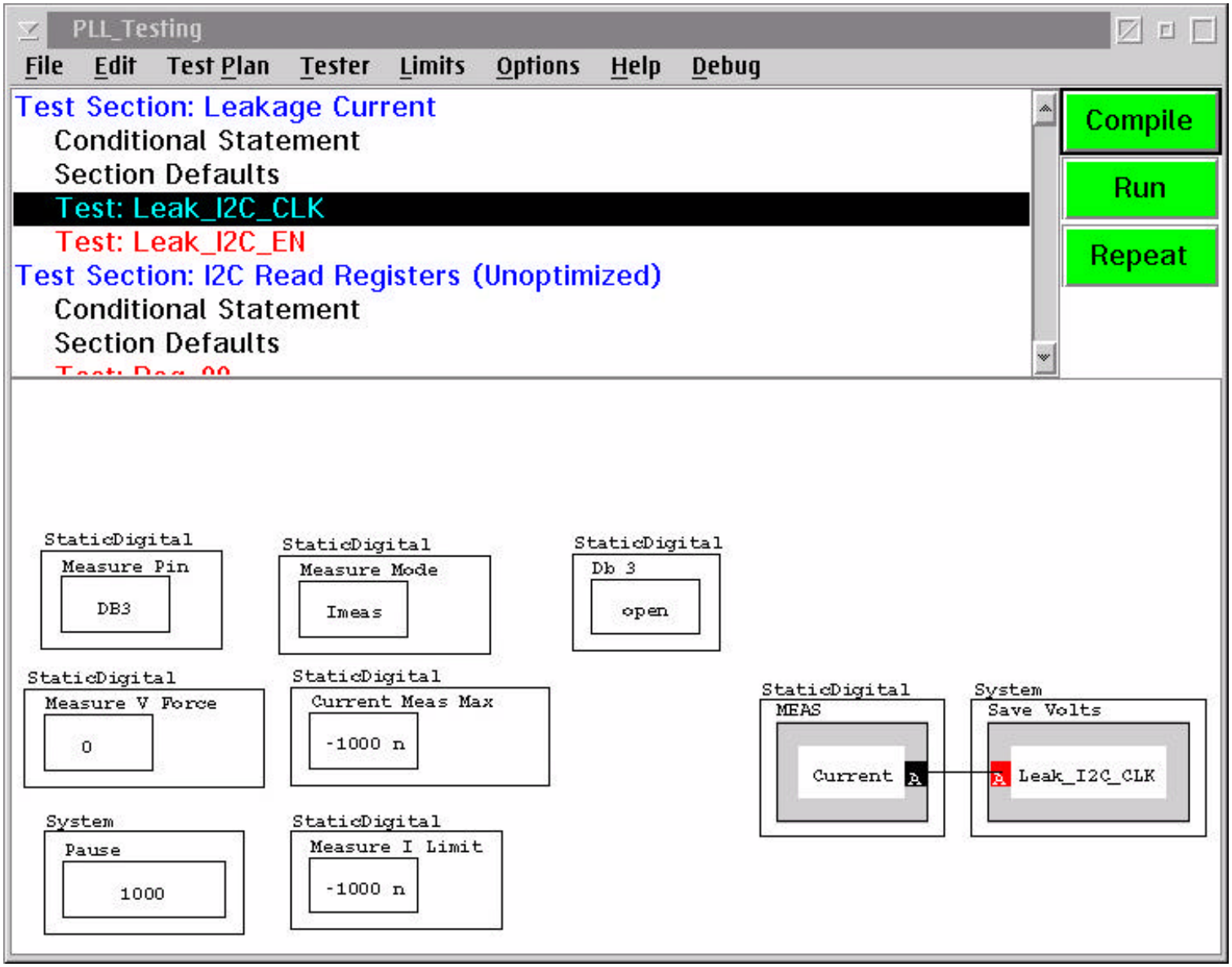
Continuity Test for Typical VCC Line



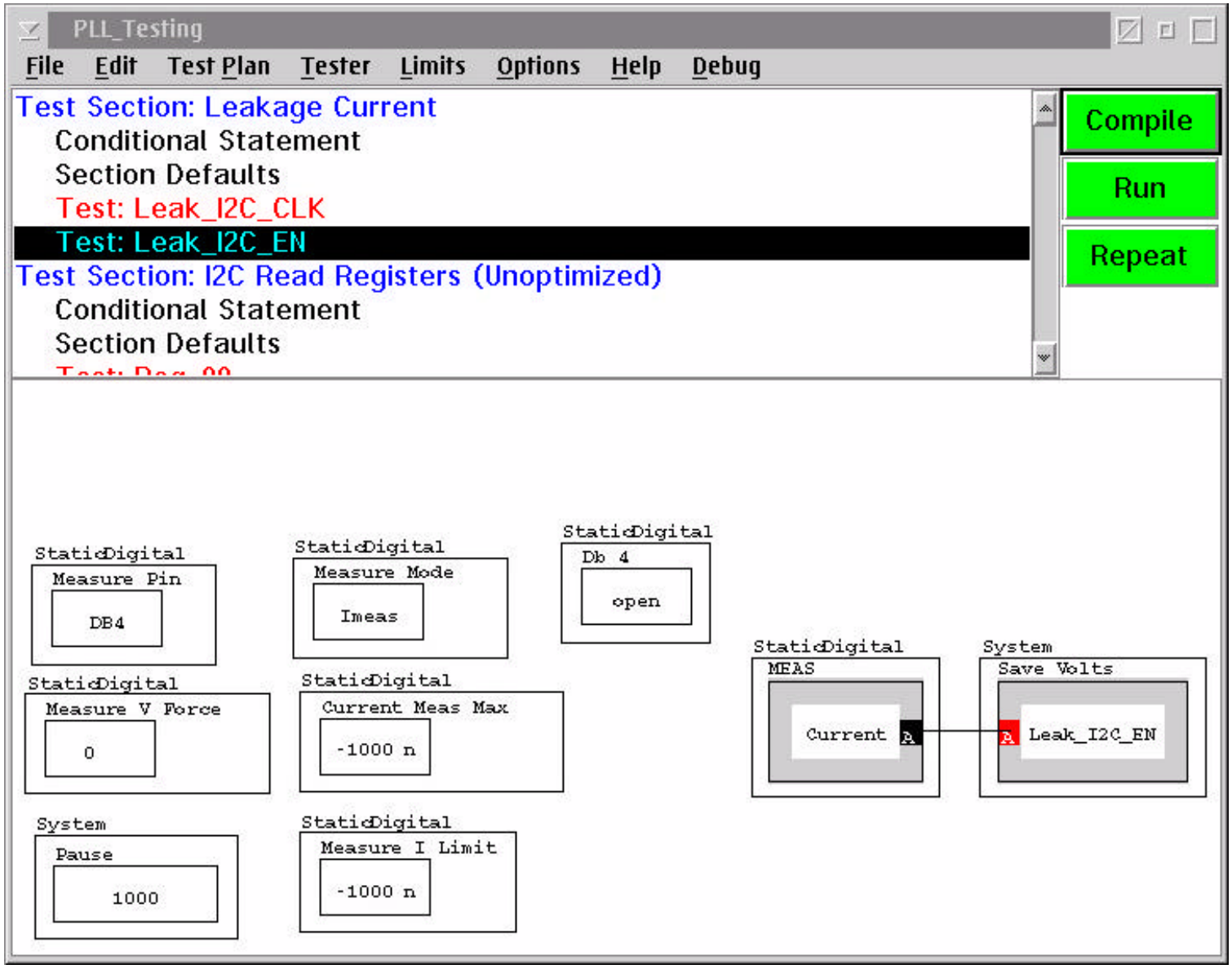
Leakage Current, Section Defaults
Force 0V on each Pin Individually



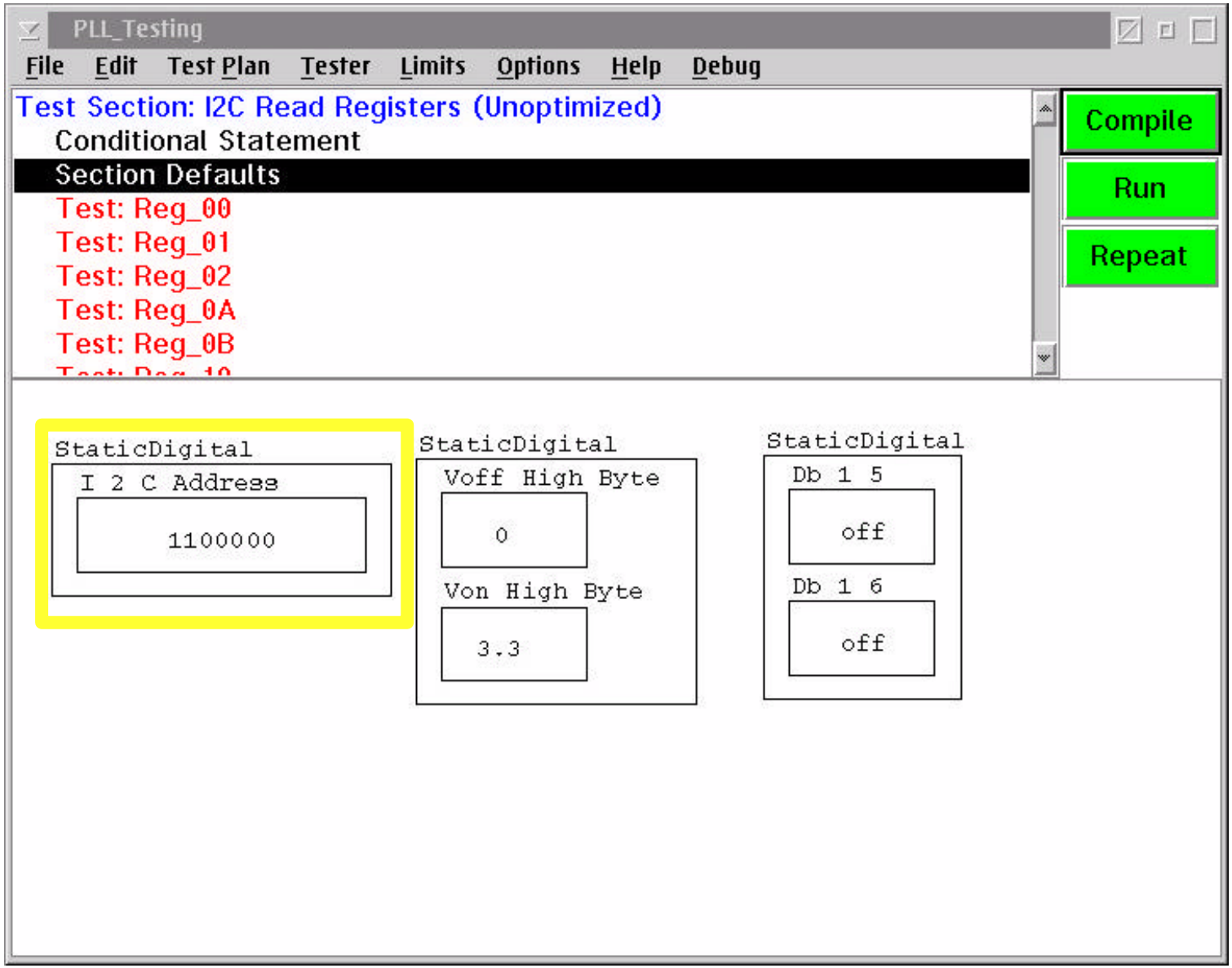
Leakage Current for Digital Pin



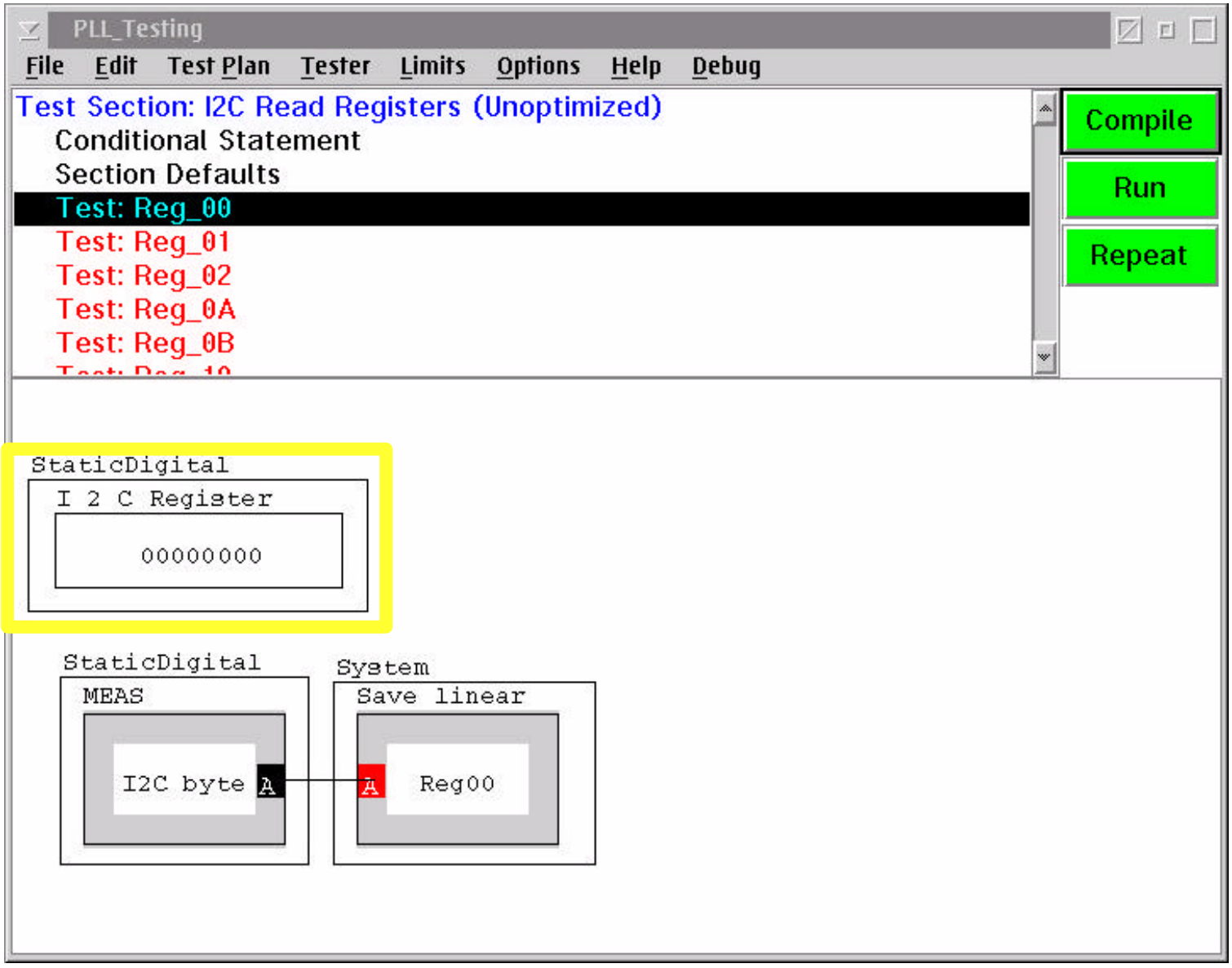
Leakage Current for Control Line



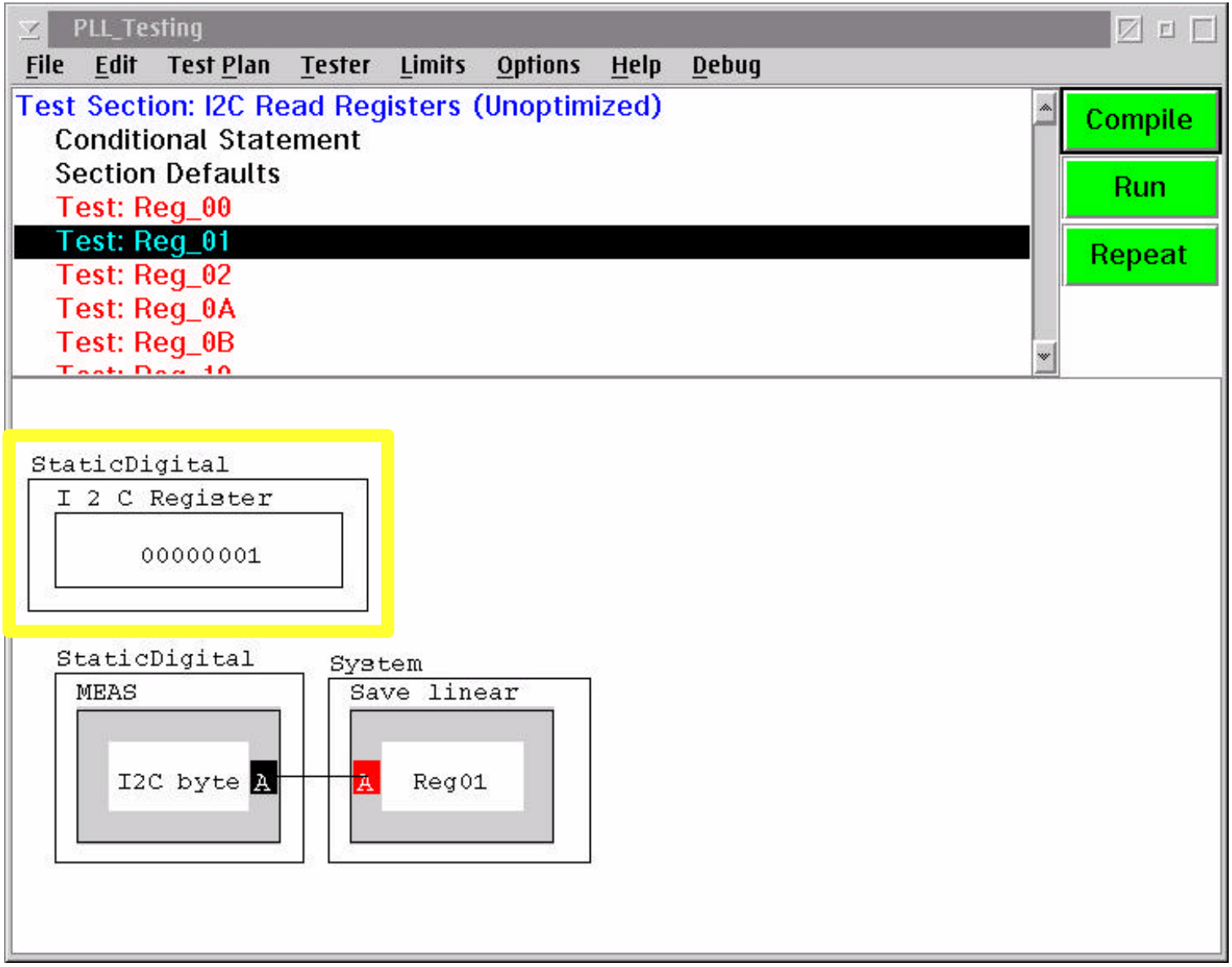
I2C Read Registers, Section Defaults



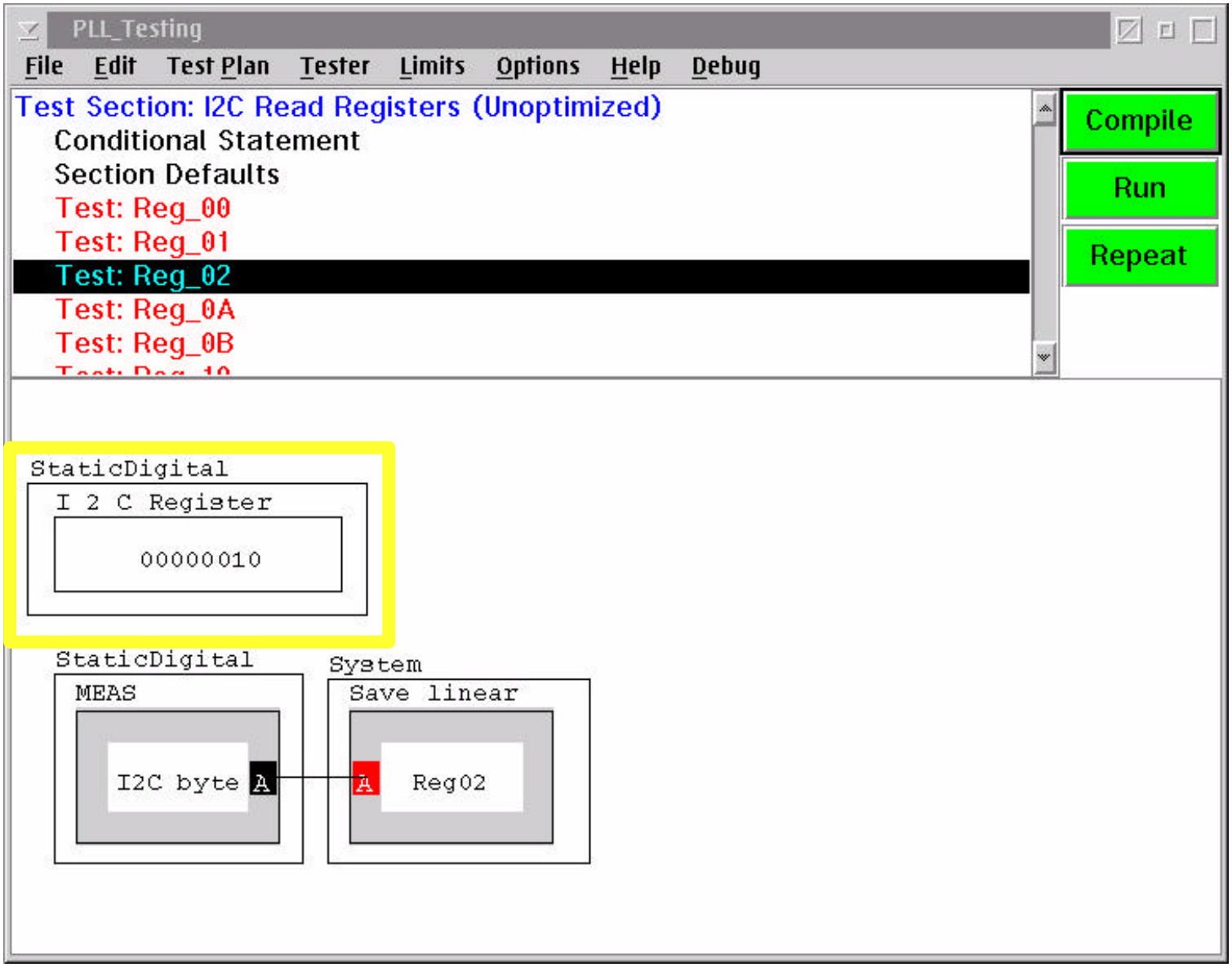
Read Register 00



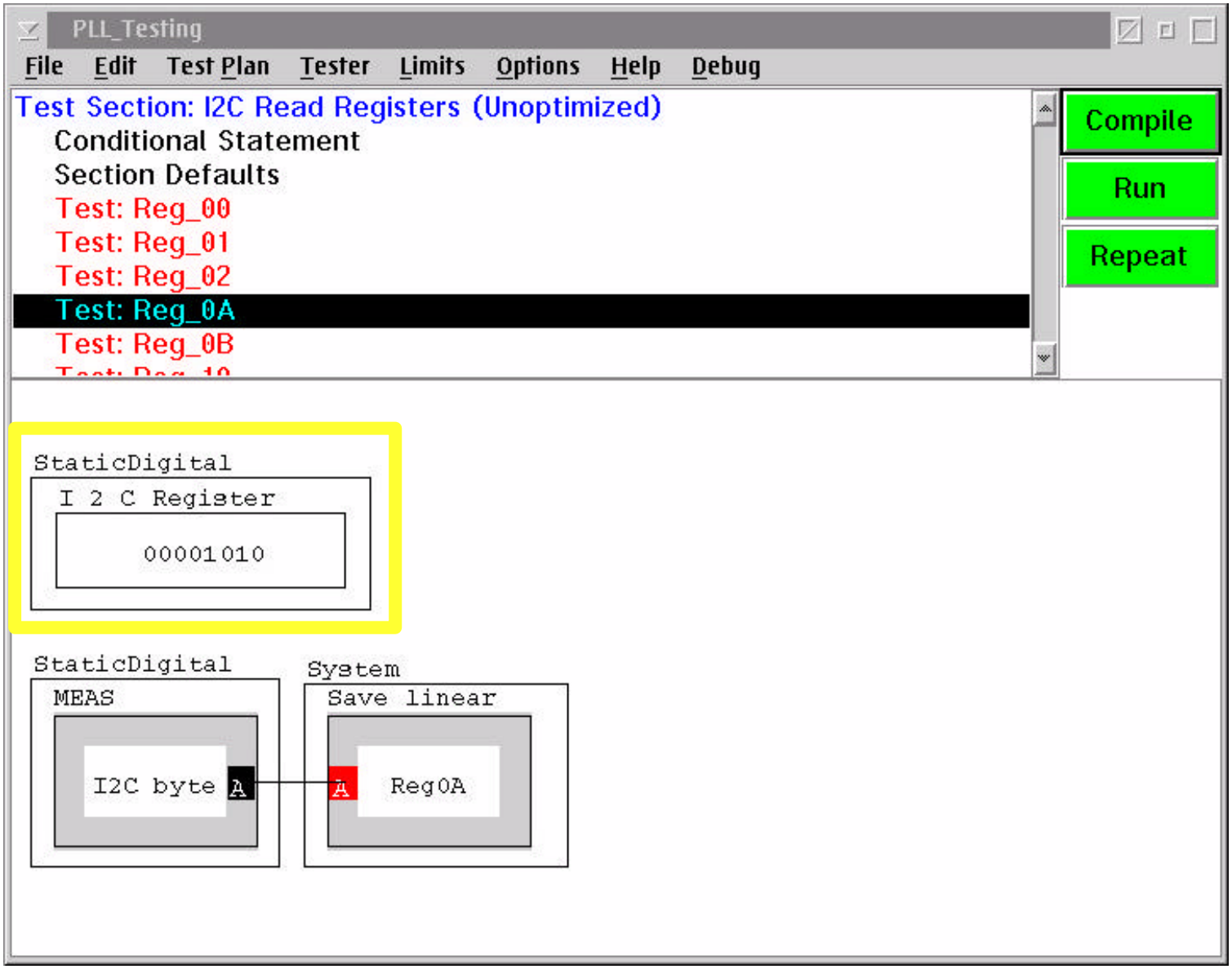
Read Register 01



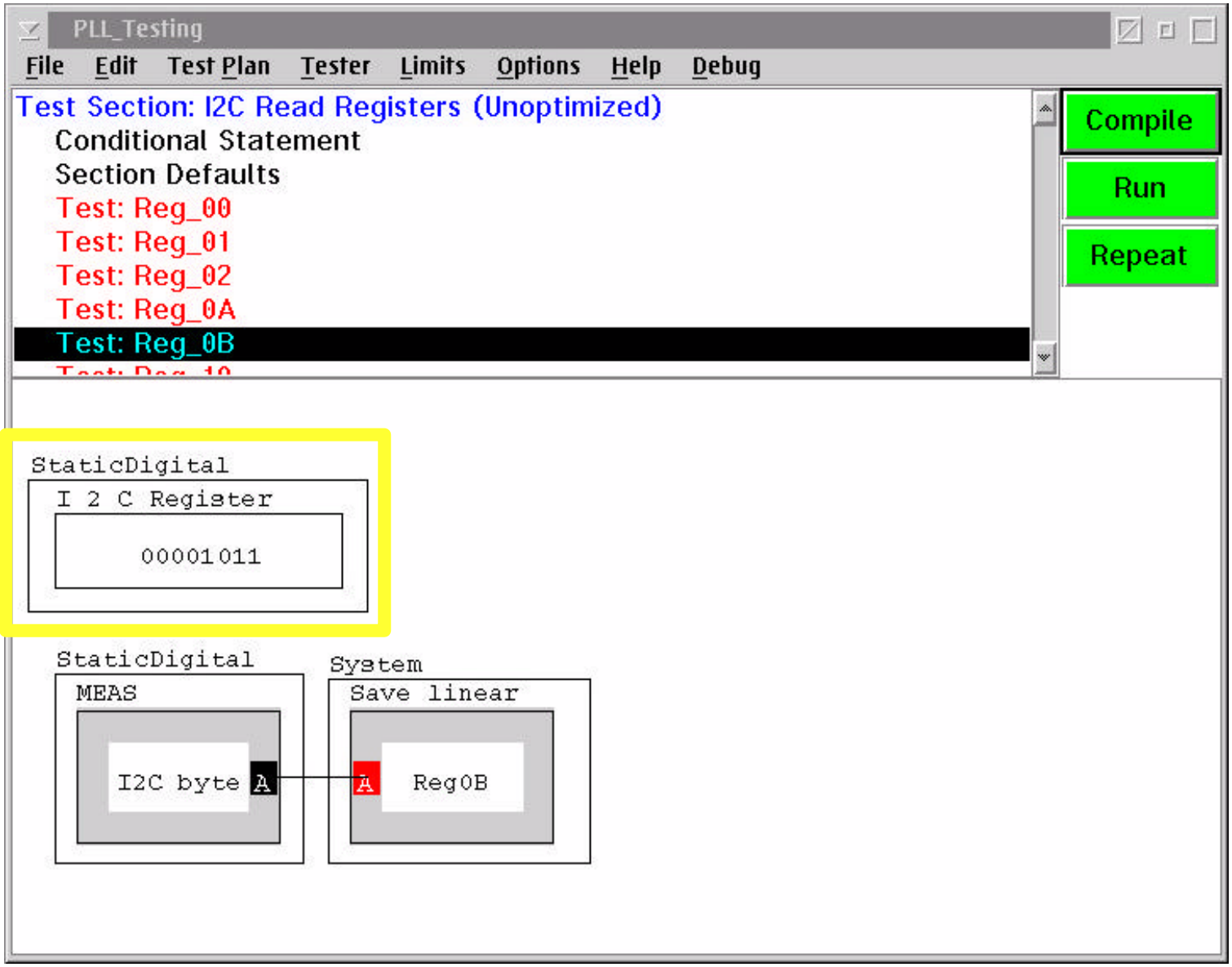
Read Register 02



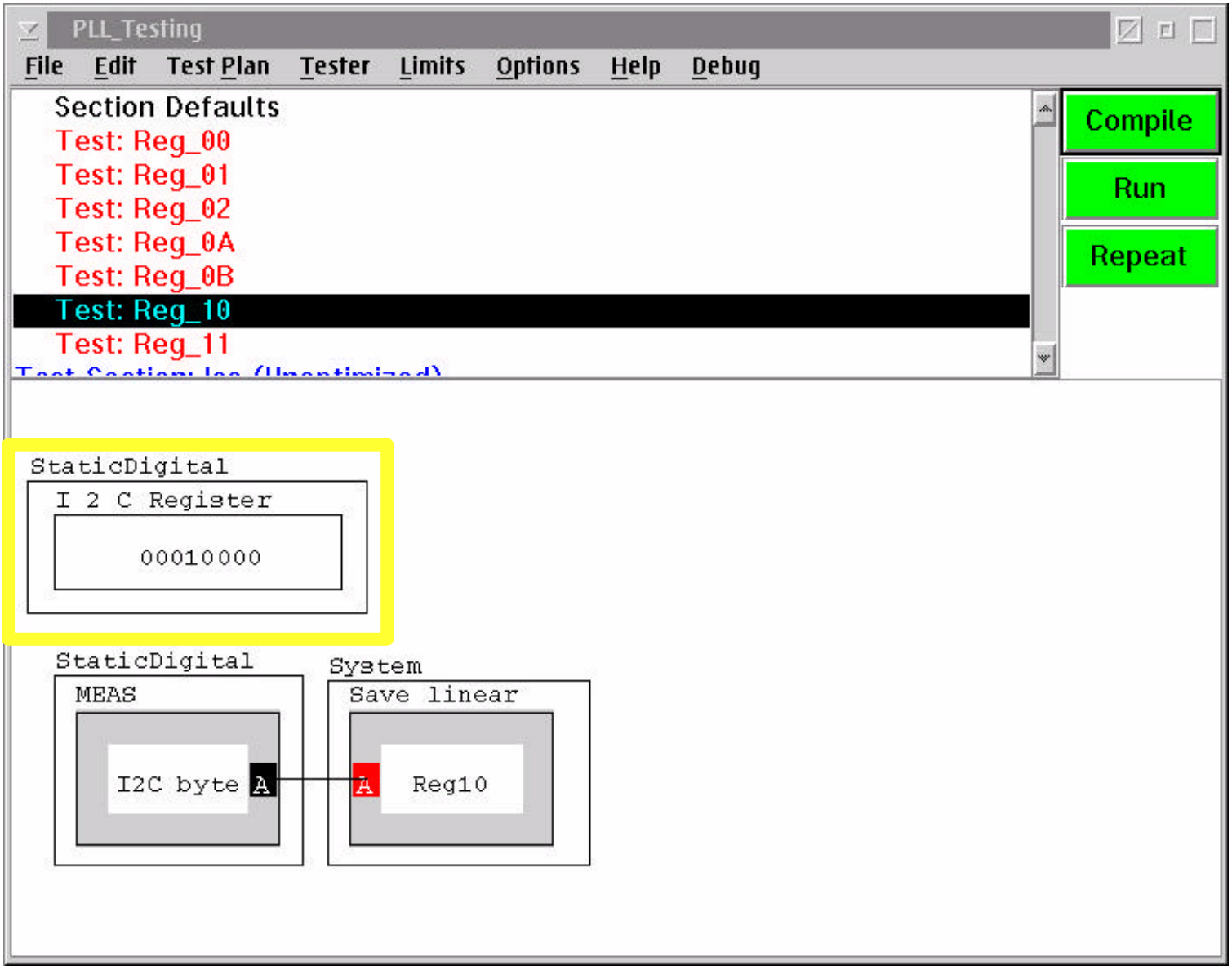
Read Register 0A



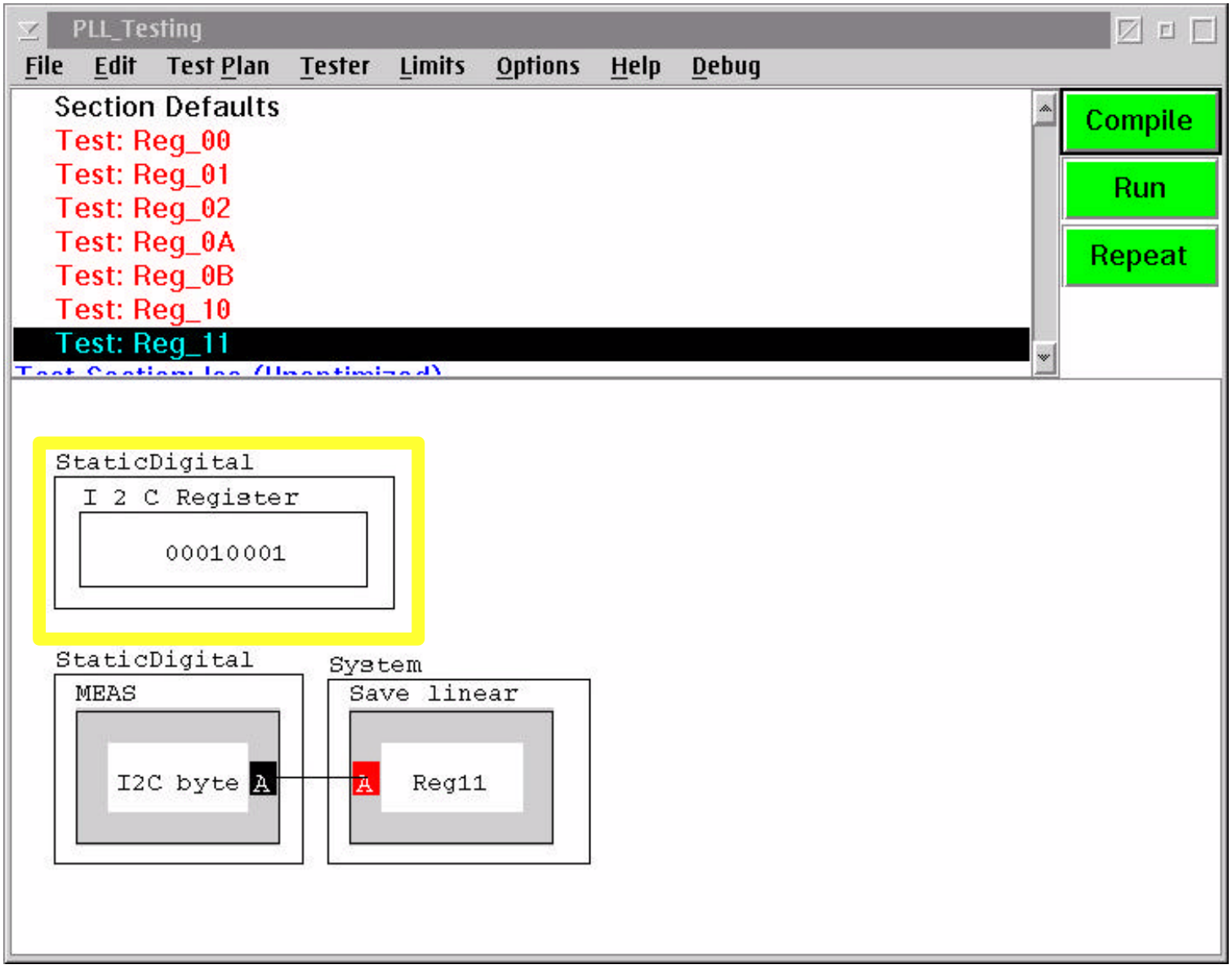
Read Register 0B



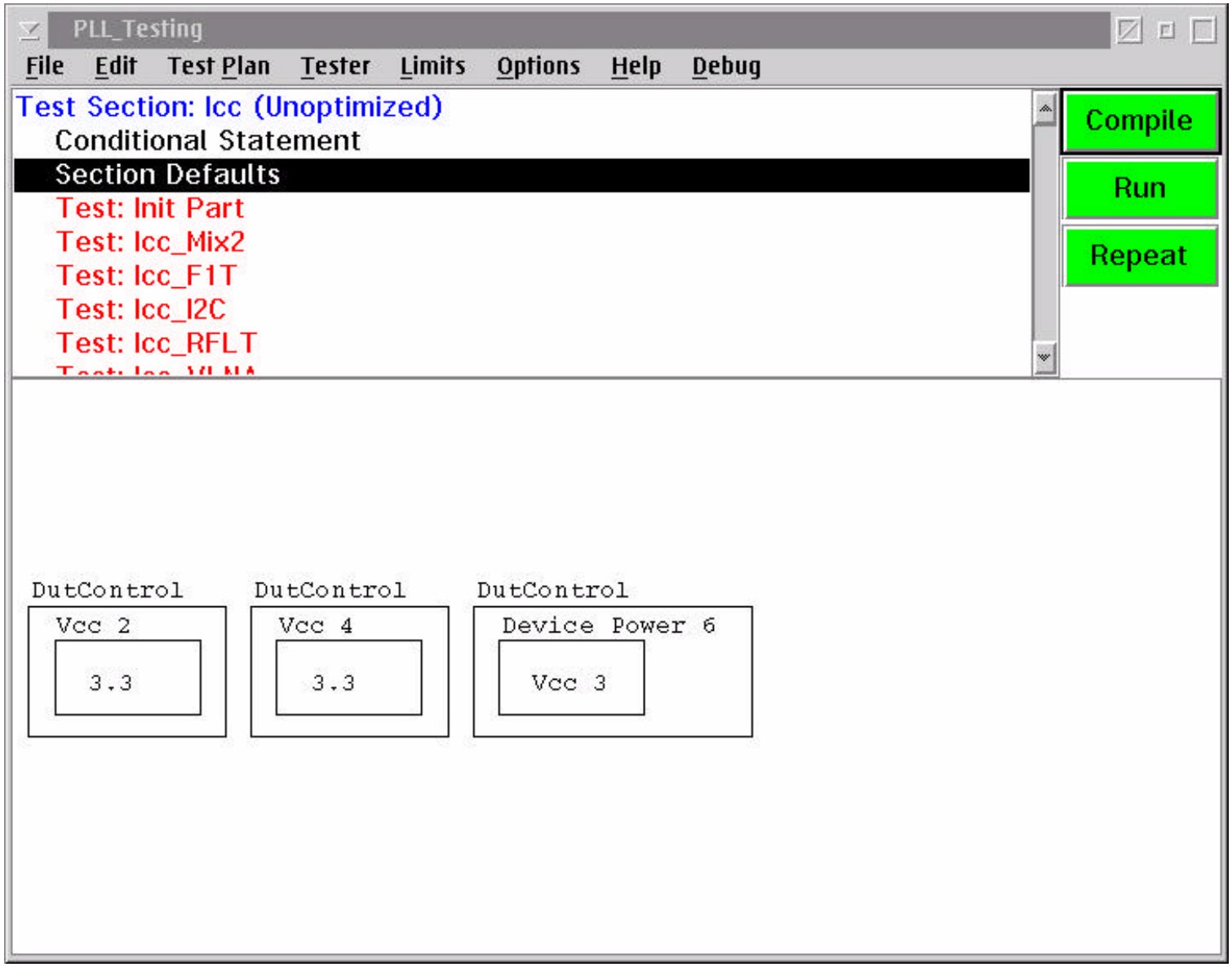
Read Register 10



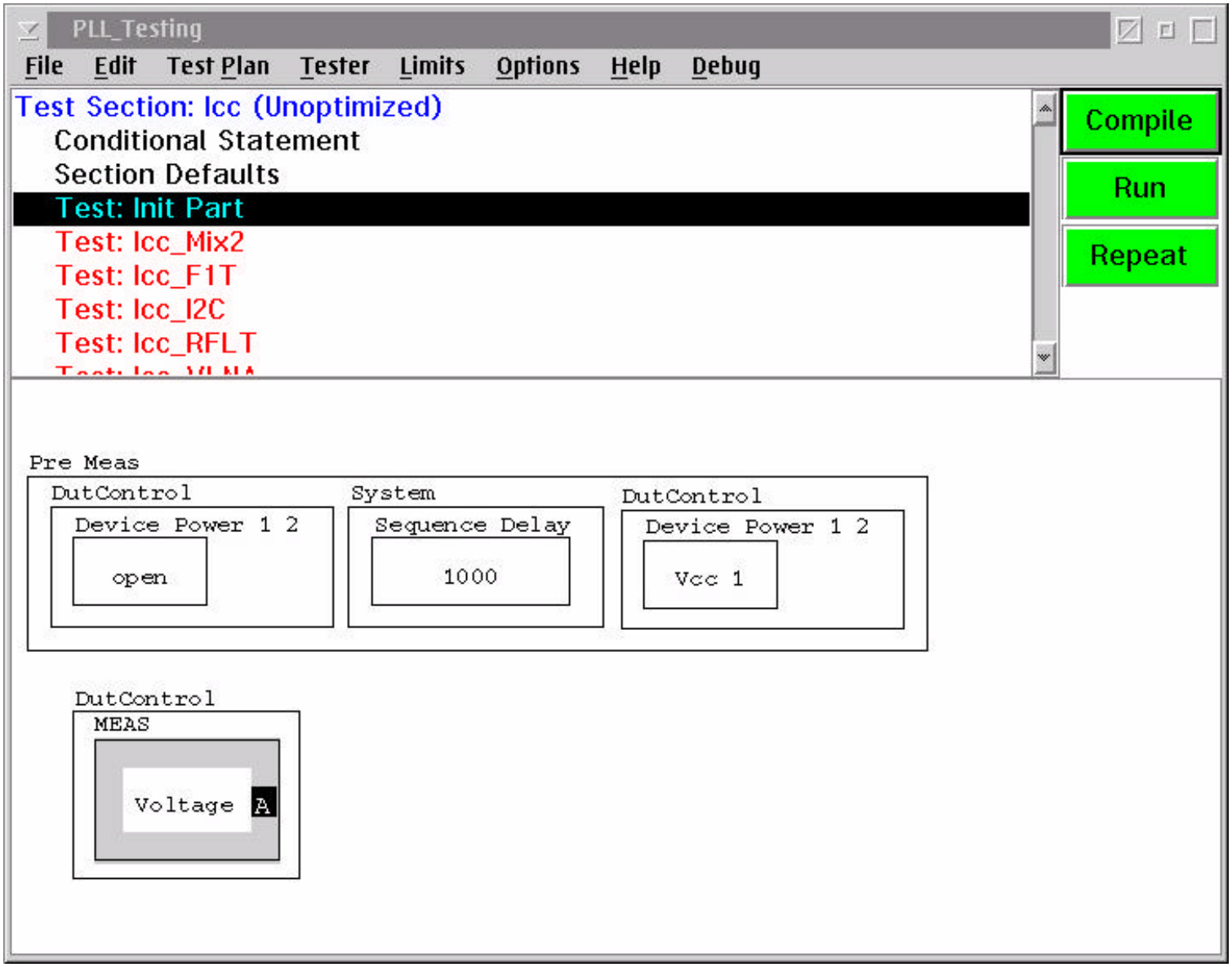
Read Register 11



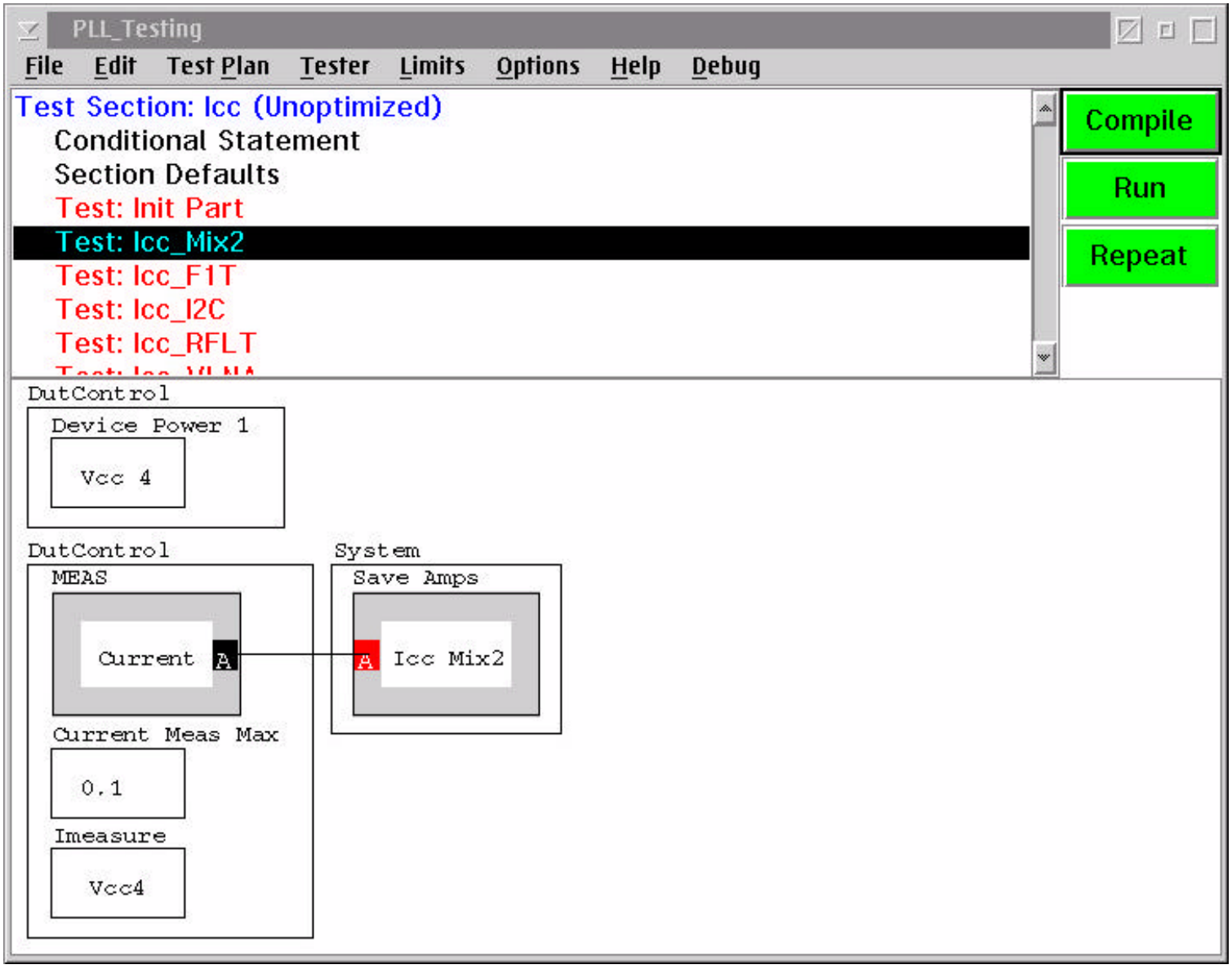
Icc Measurements, Section Defaults



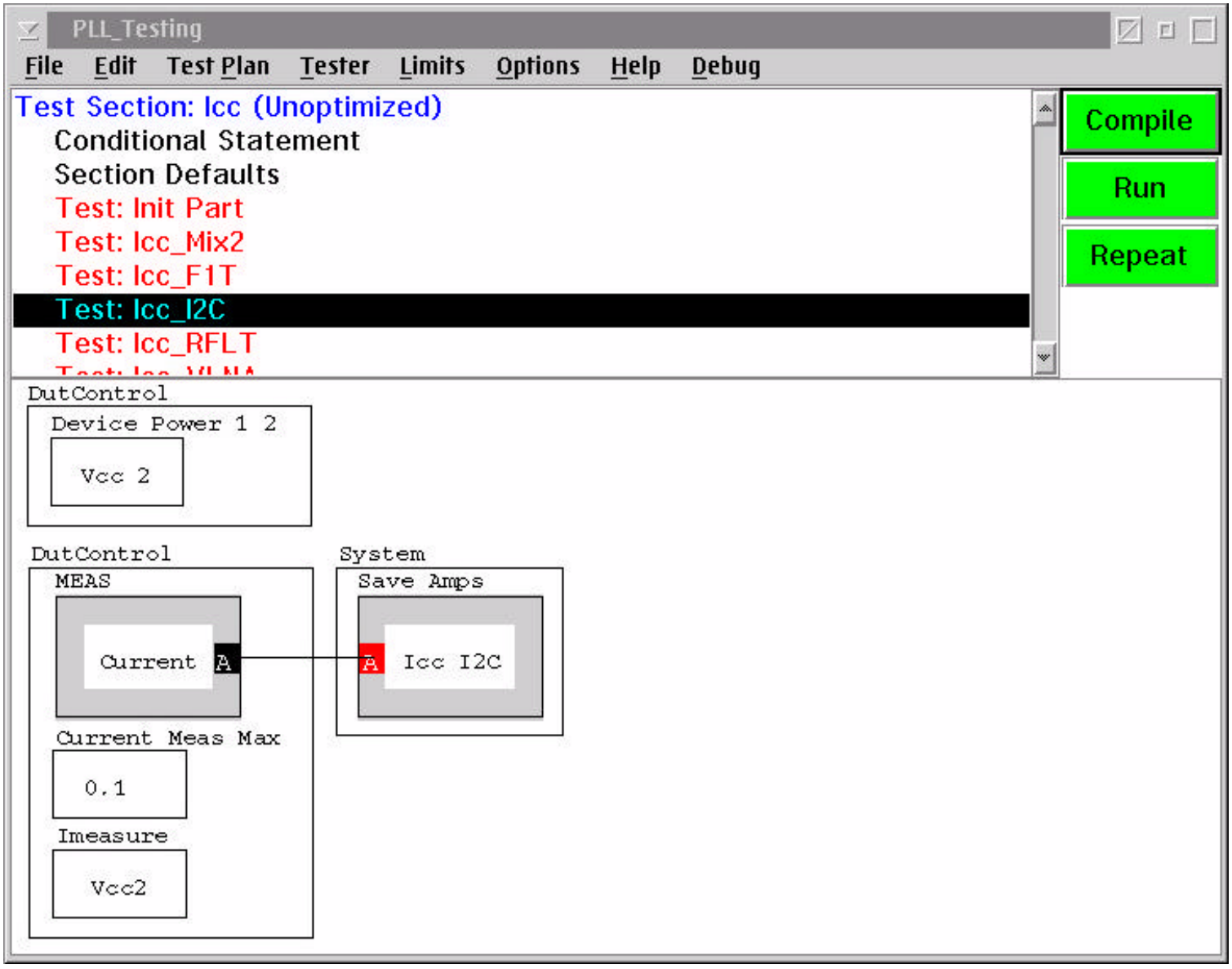
Typical Way to Initialize Part, Remove Vcc, wait, Add Vcc



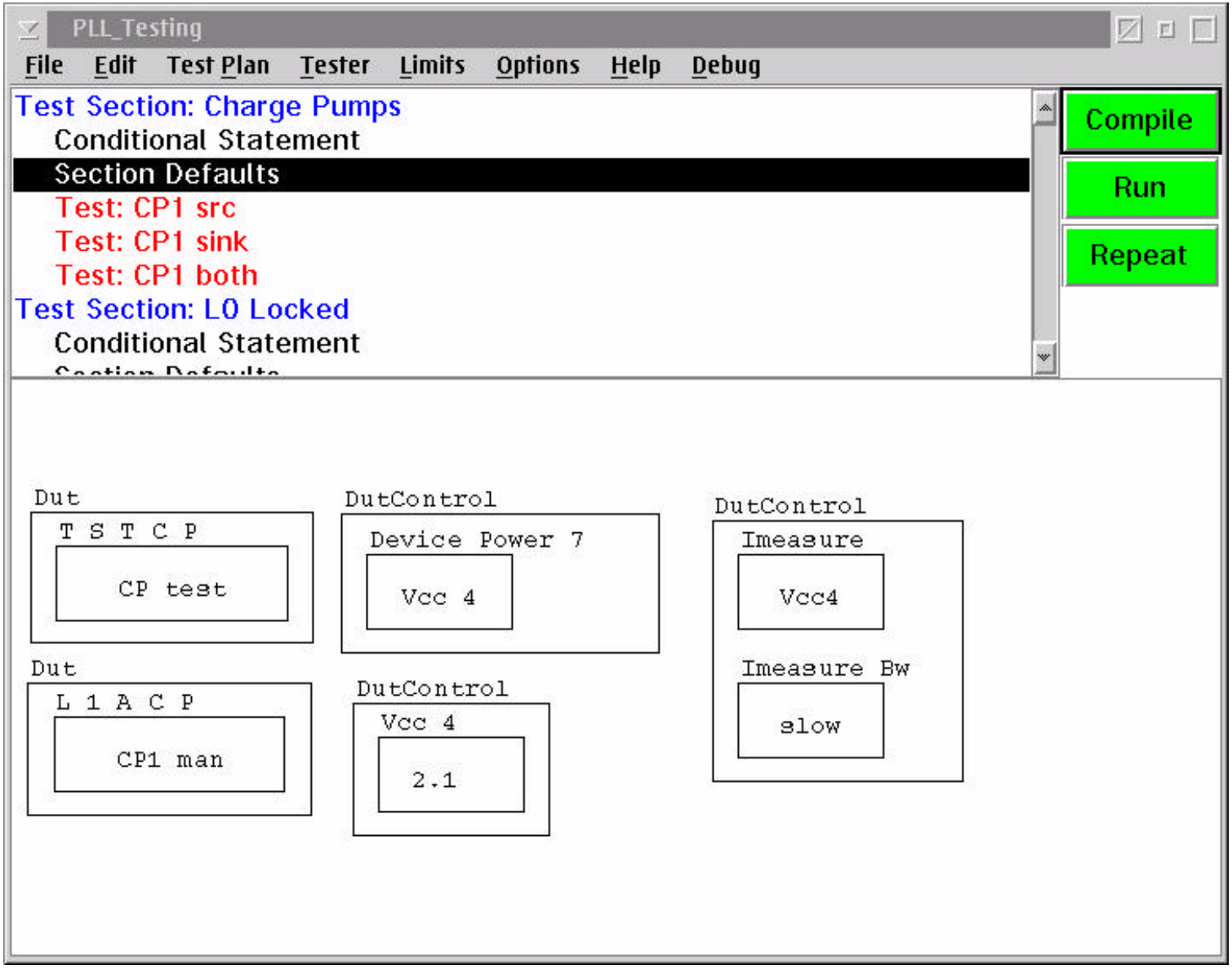
Typical Icc Measurement



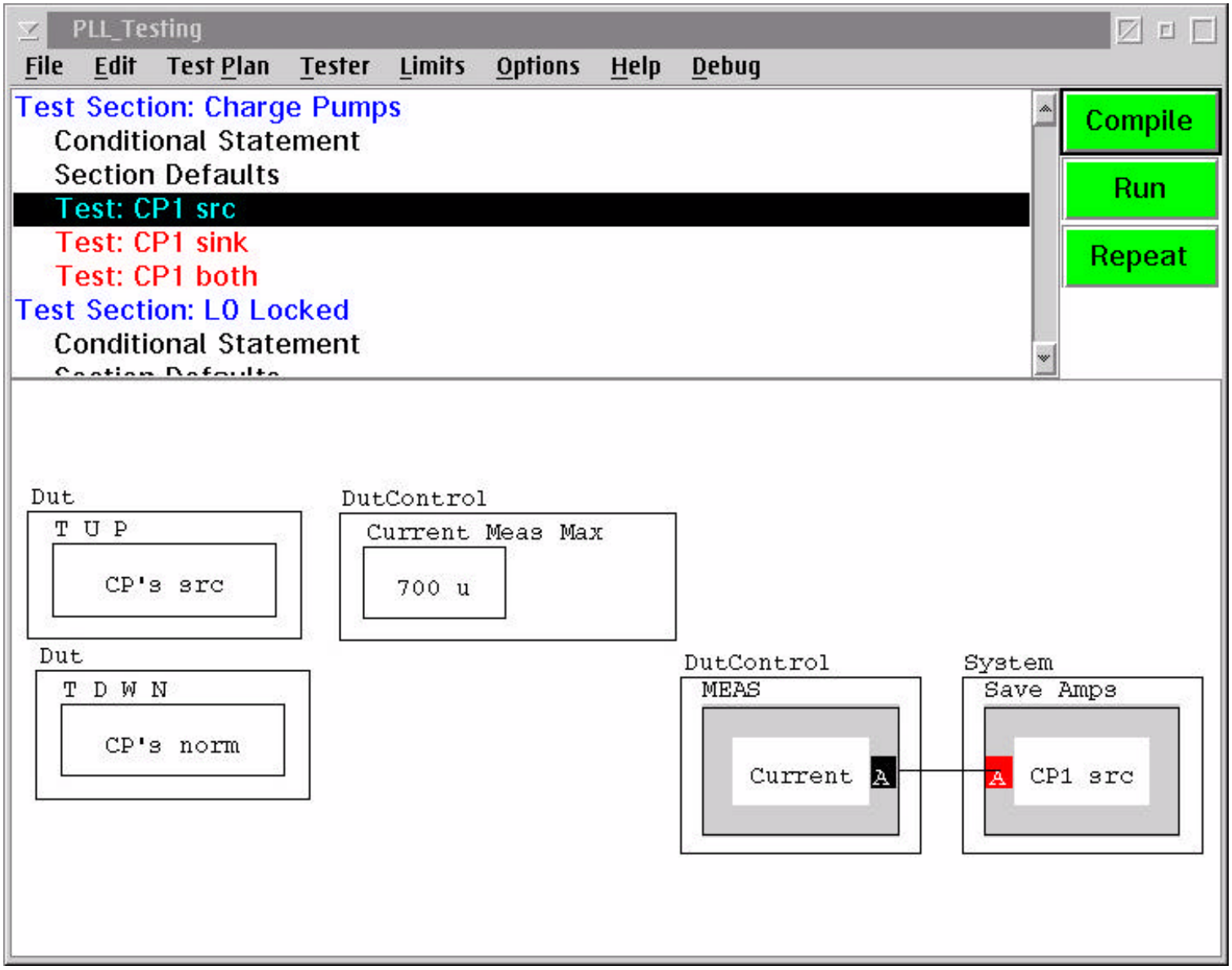
Icc for I2C Supply Line



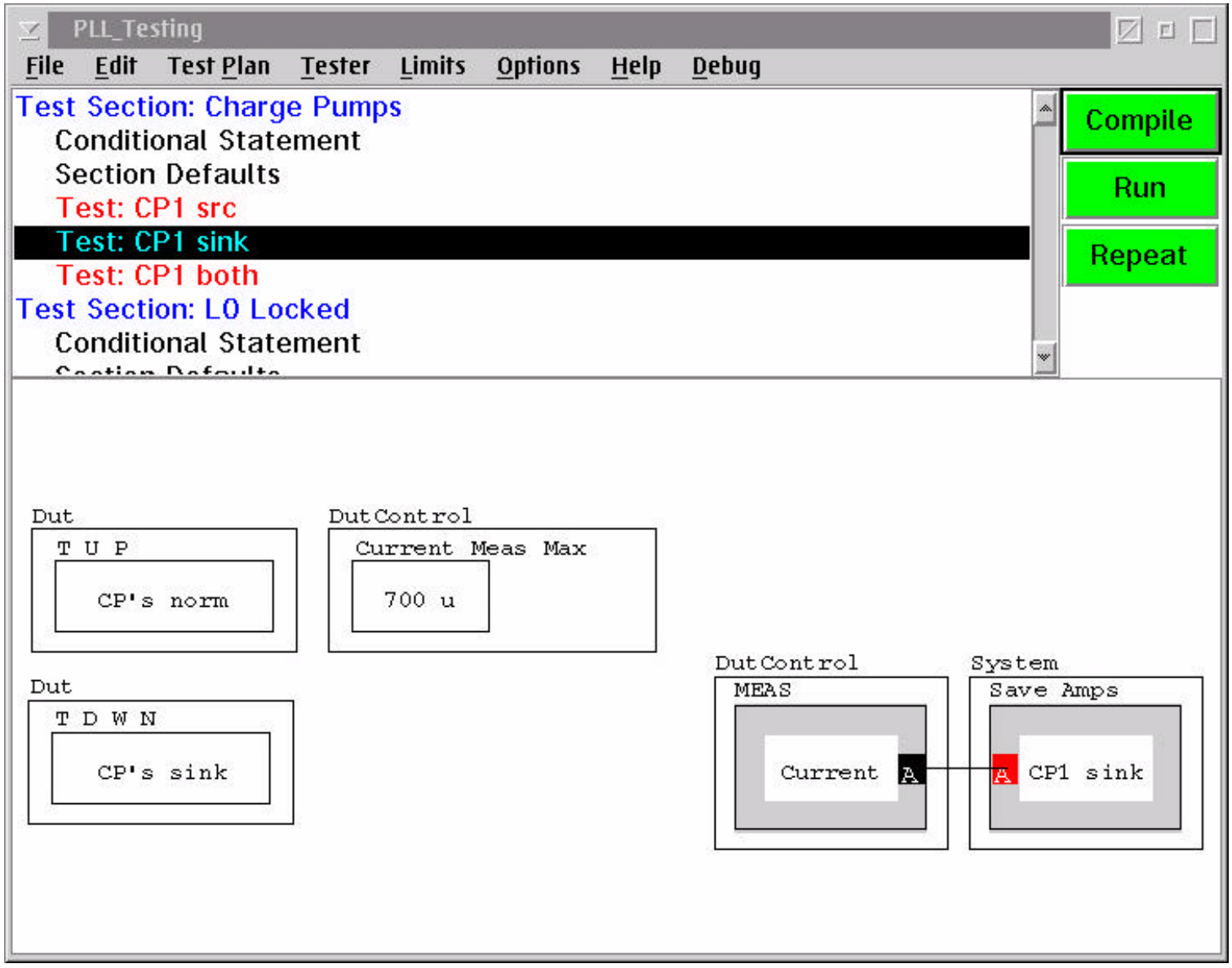
Charge Pump Section Defaults



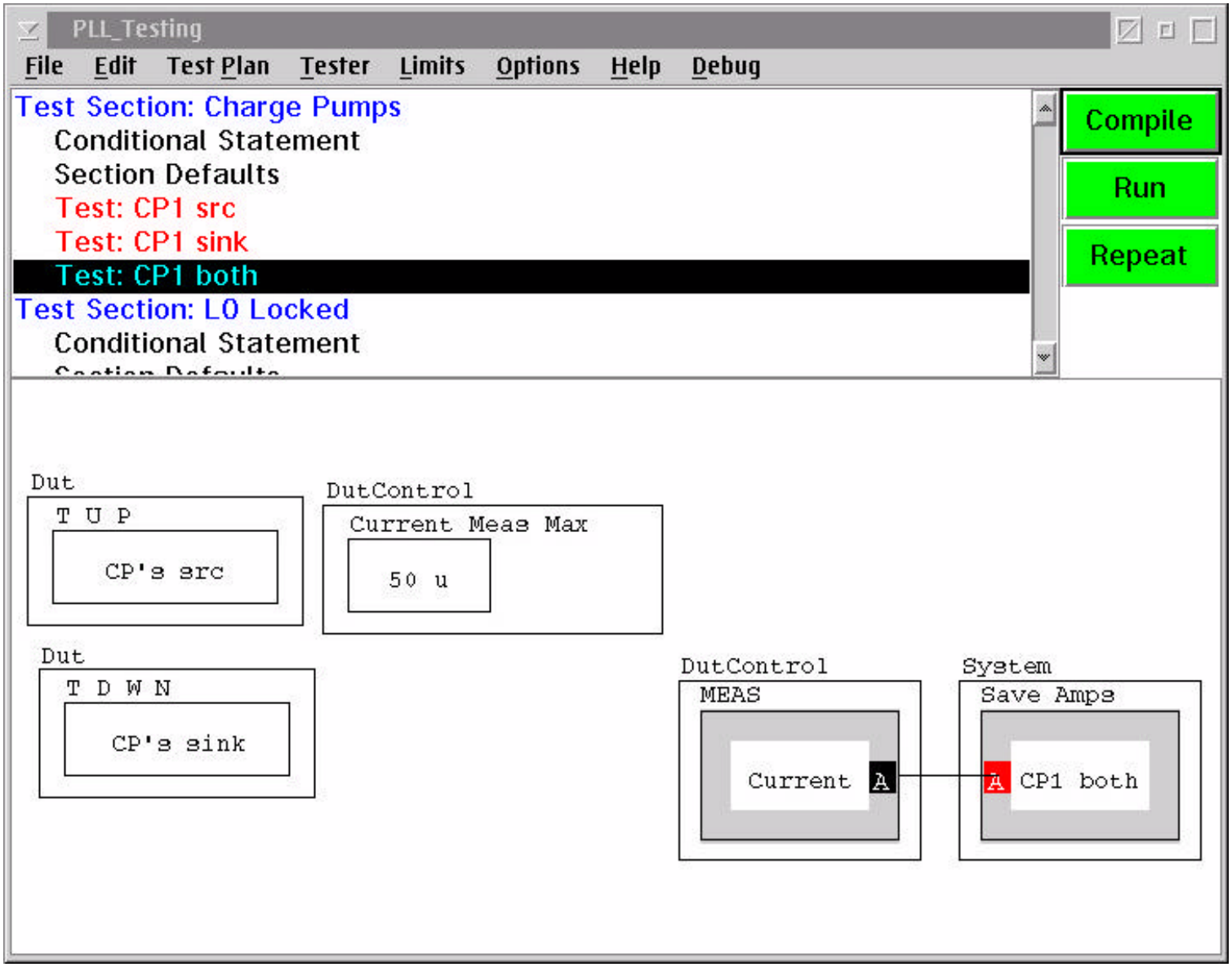
Charge Pump Source Current



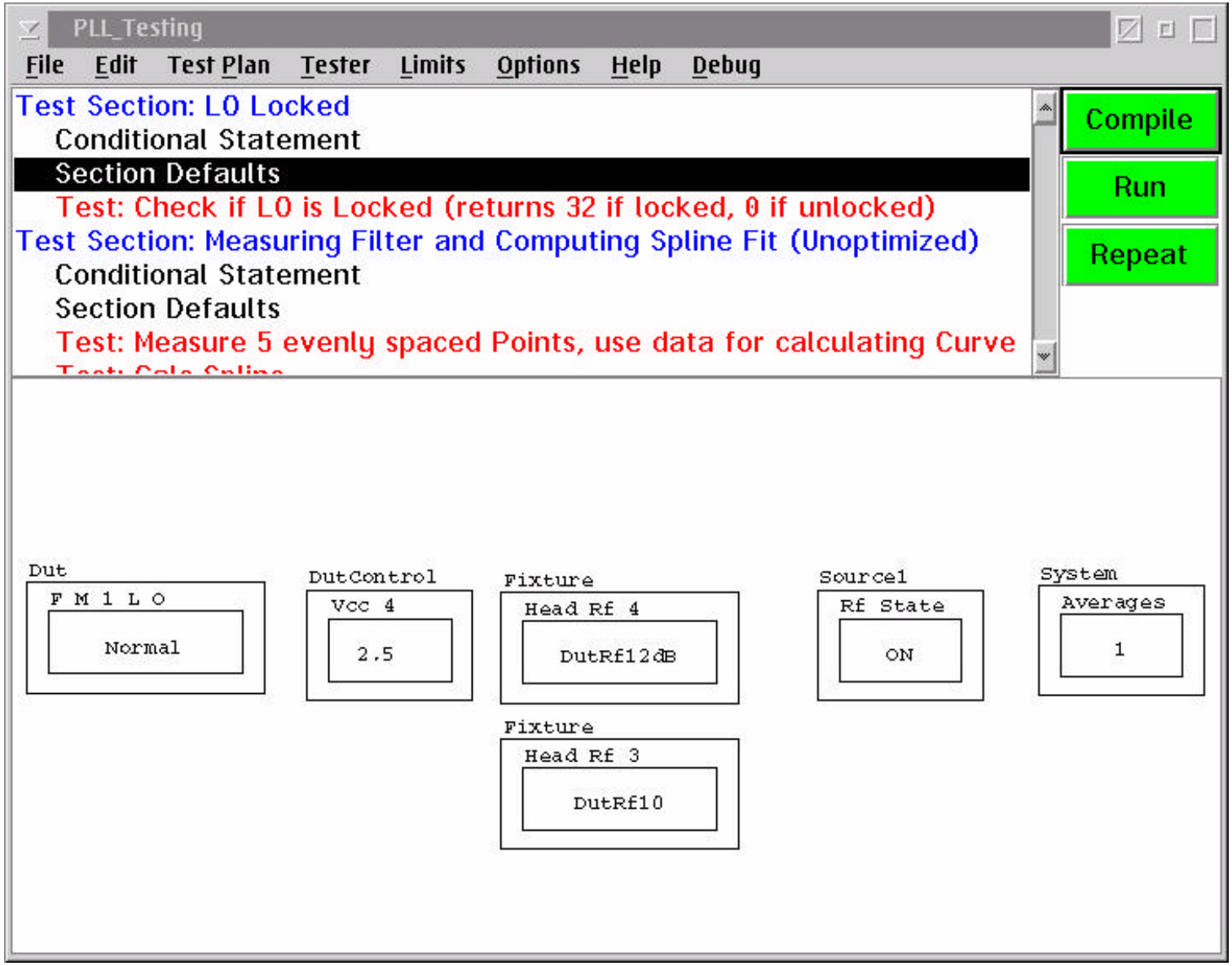
Charge Pump Sink Current



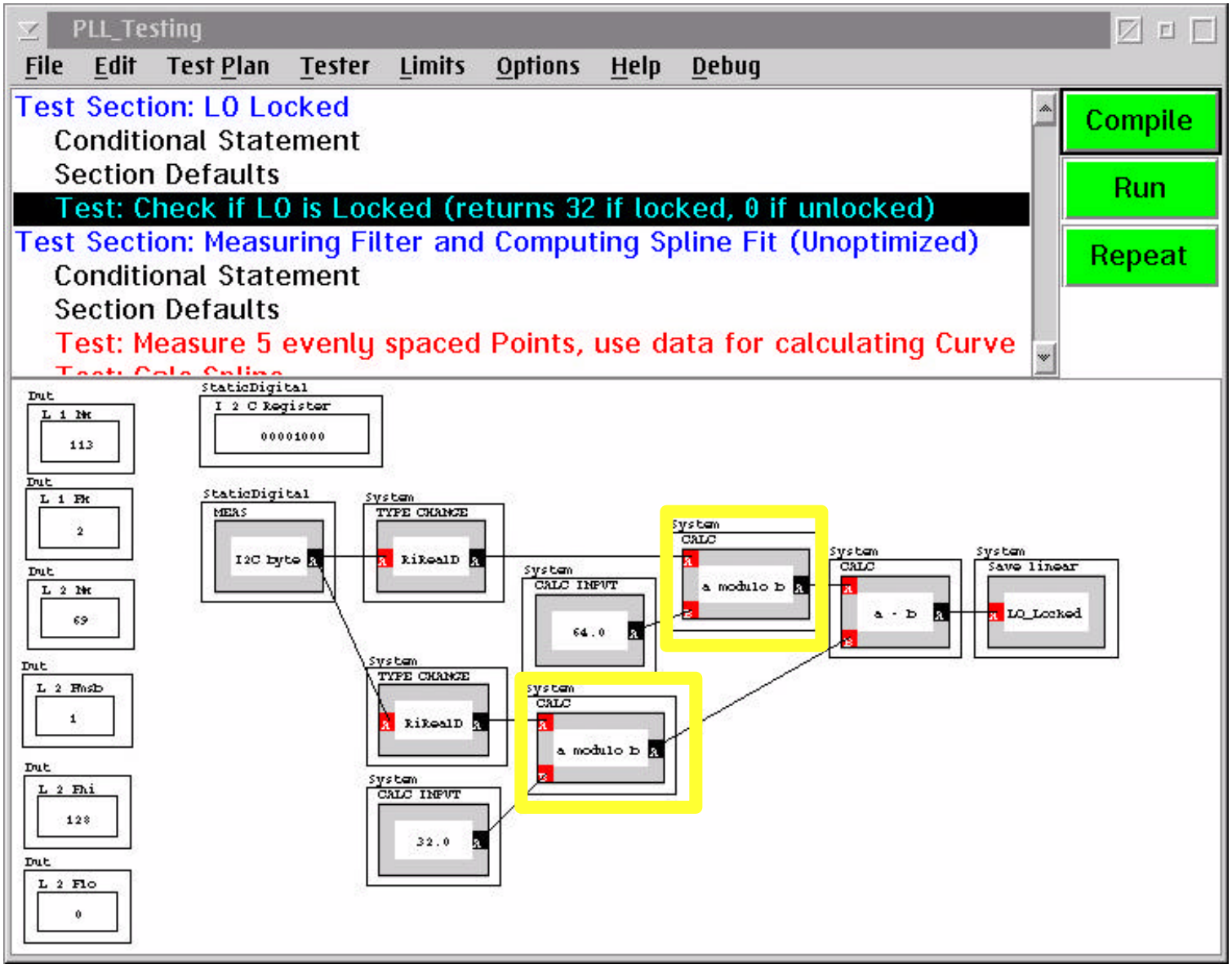
Testing Both Charge Pump Sink & Source Current



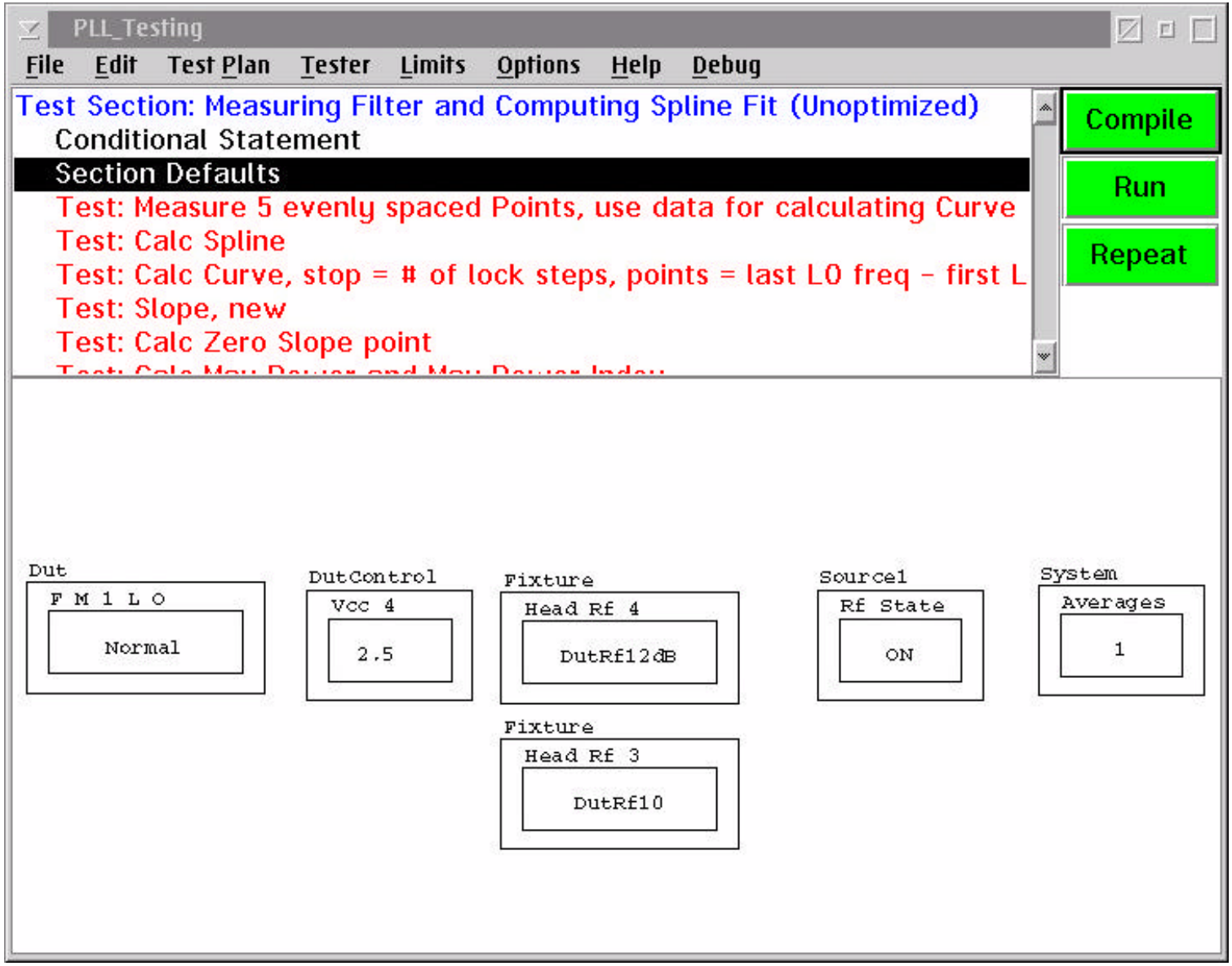
LO Locked Section Defaults



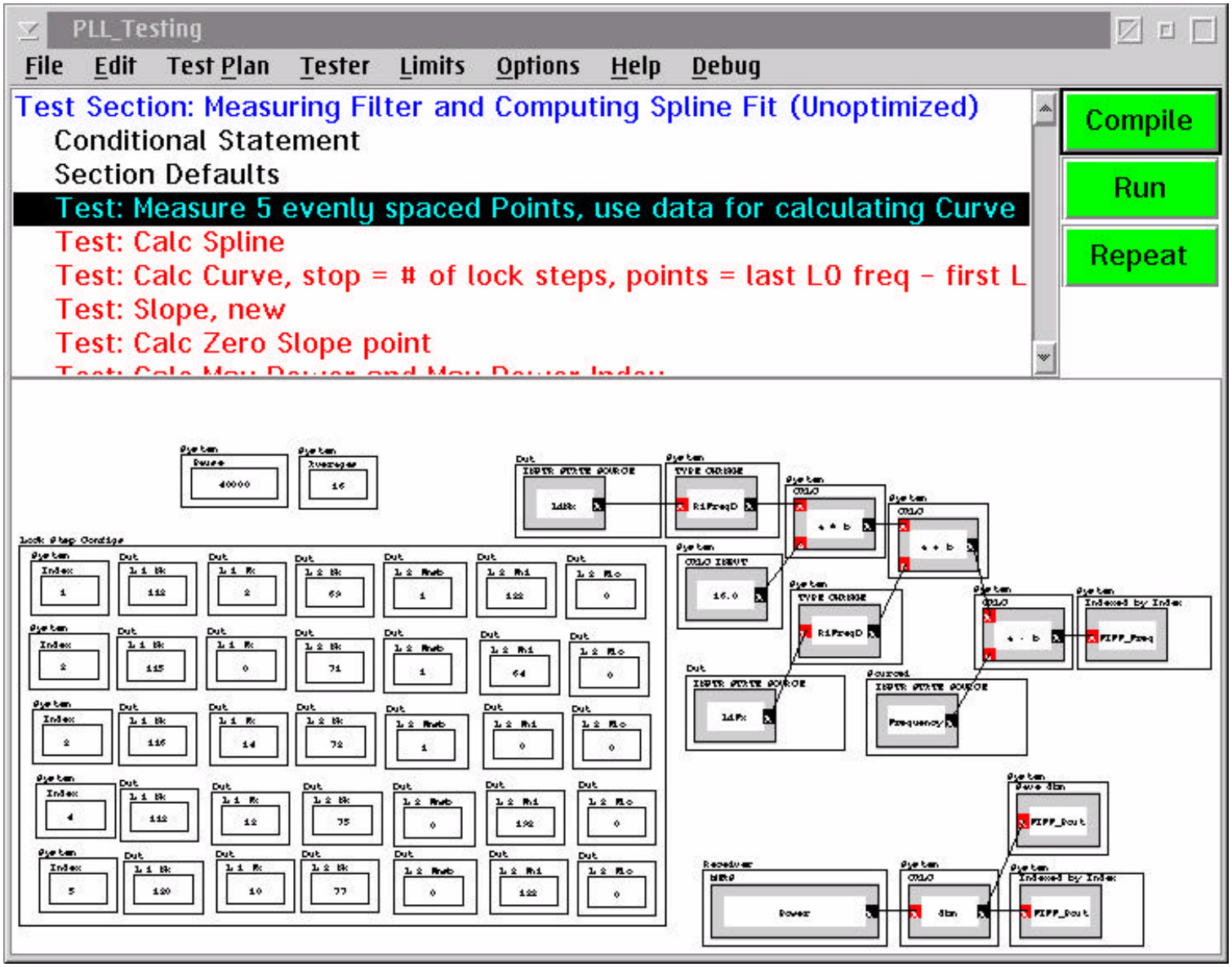
Reading Back the Lock Detect Bit
Using Modulo to Look at a Single Bit in the Register Byte



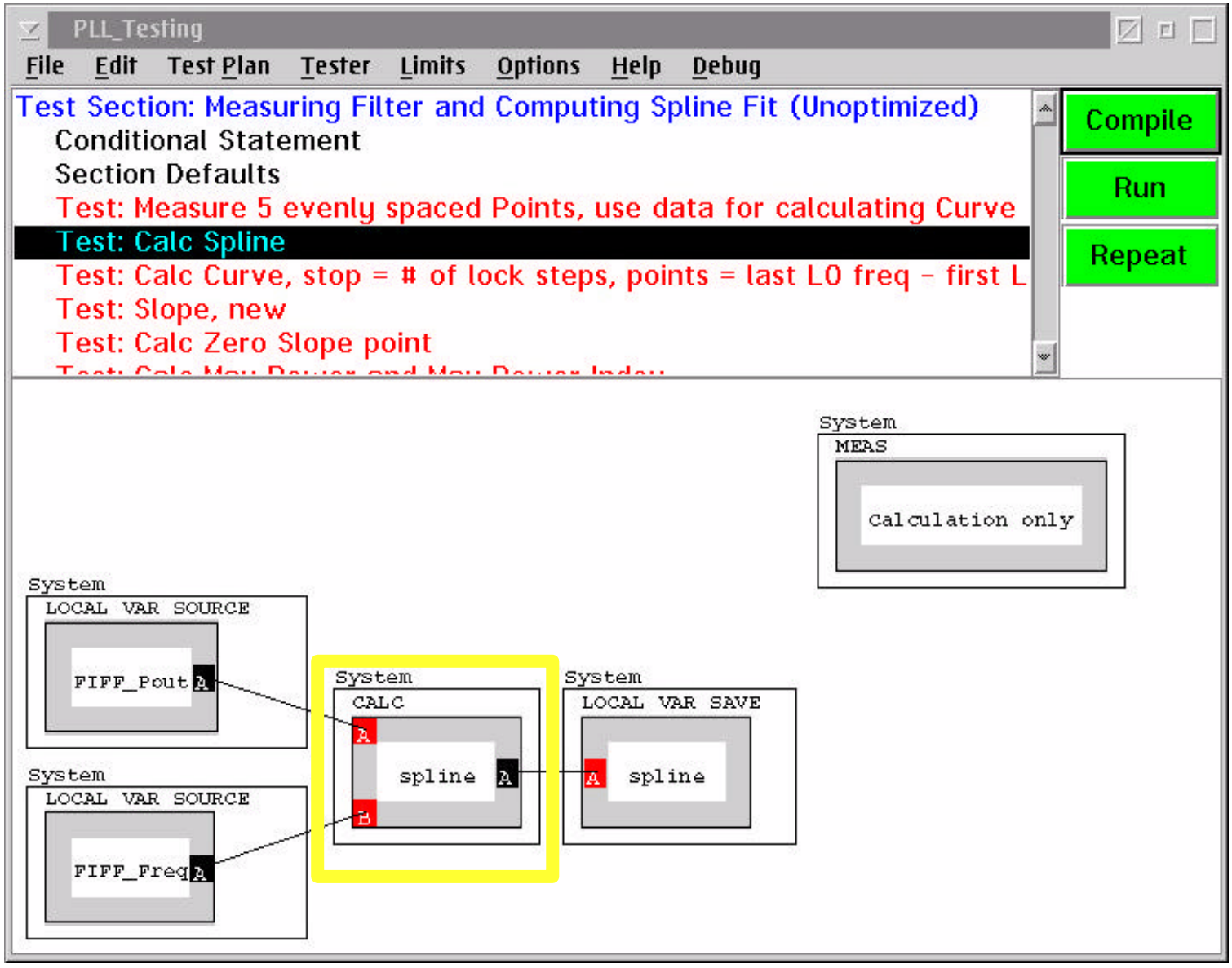
Curve Fit Section Defaults



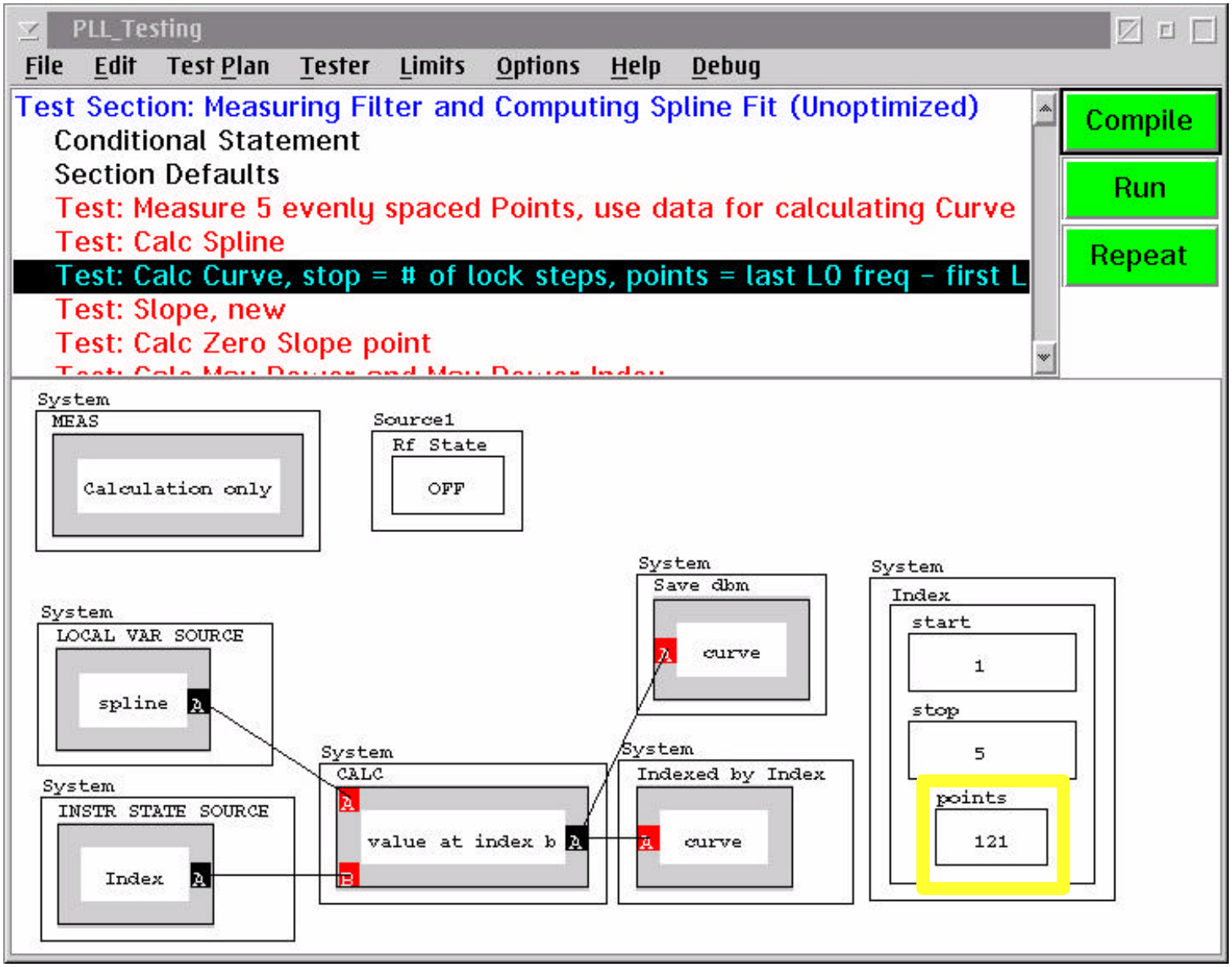
Only 5 Data Points Needed to Create Spline Curve Fit



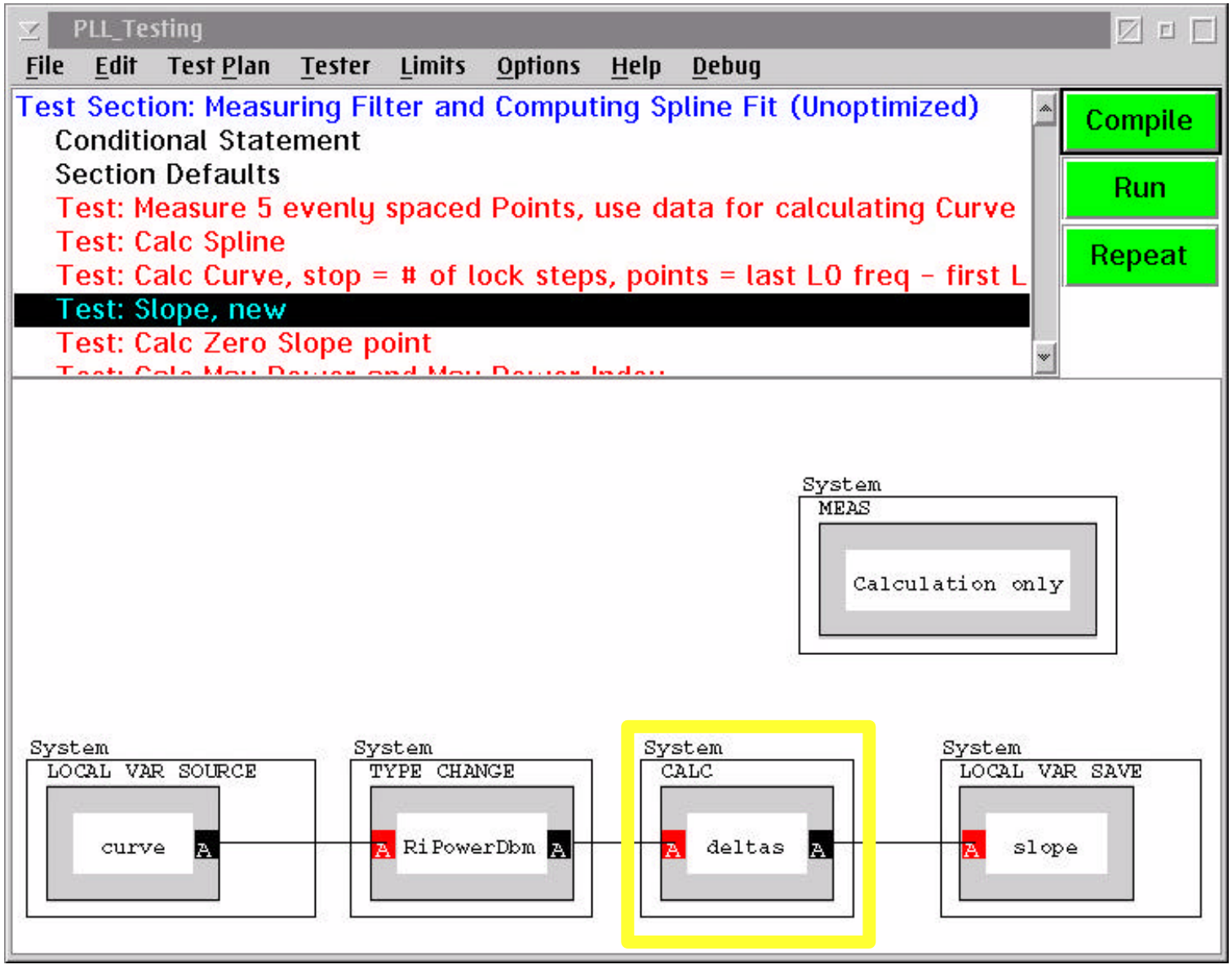
Calculate the Spline Algorithm using the Spline Calc



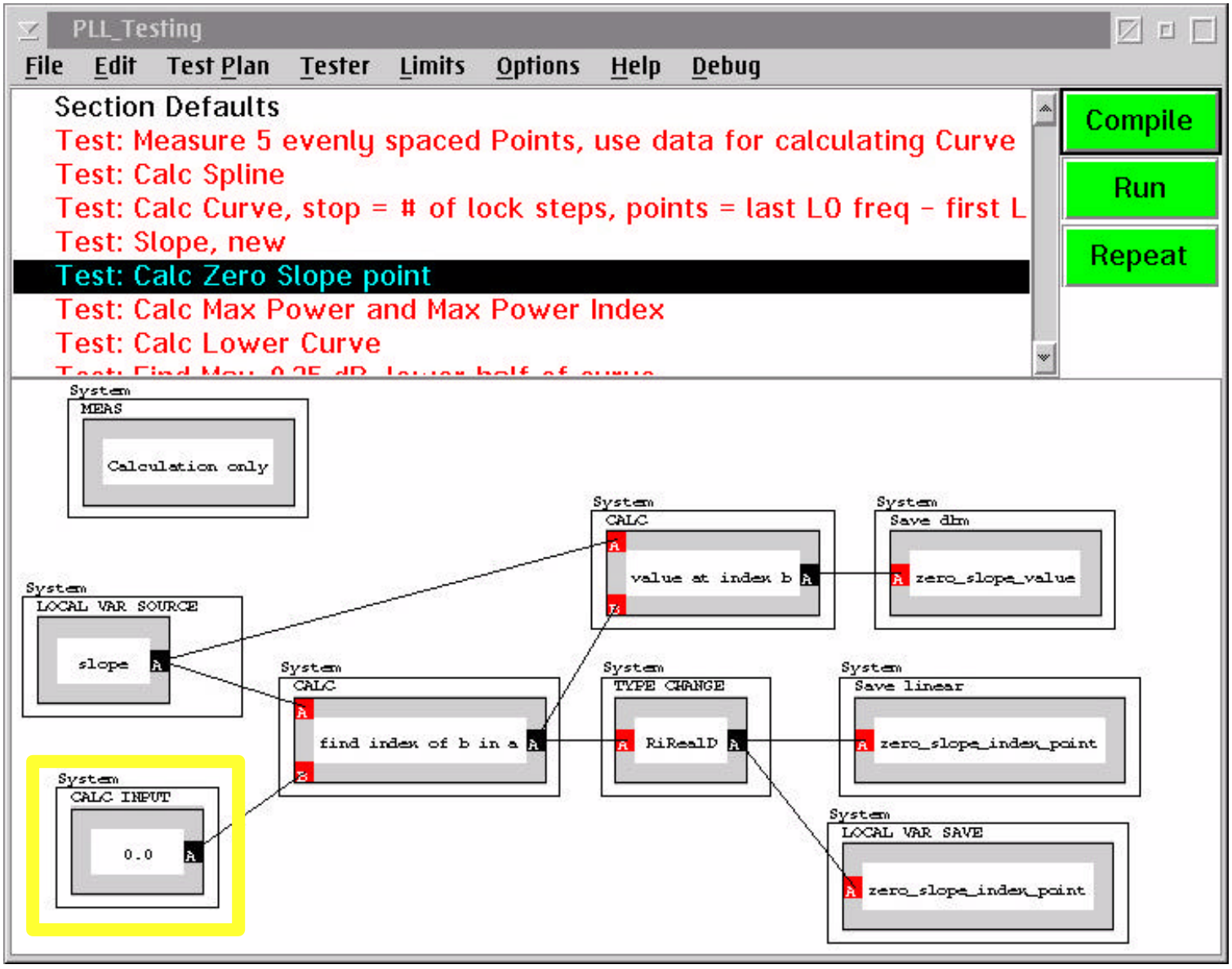
Create an Array of Data "Curve" with Data Points every 1 MHz from the Spline Algorithm



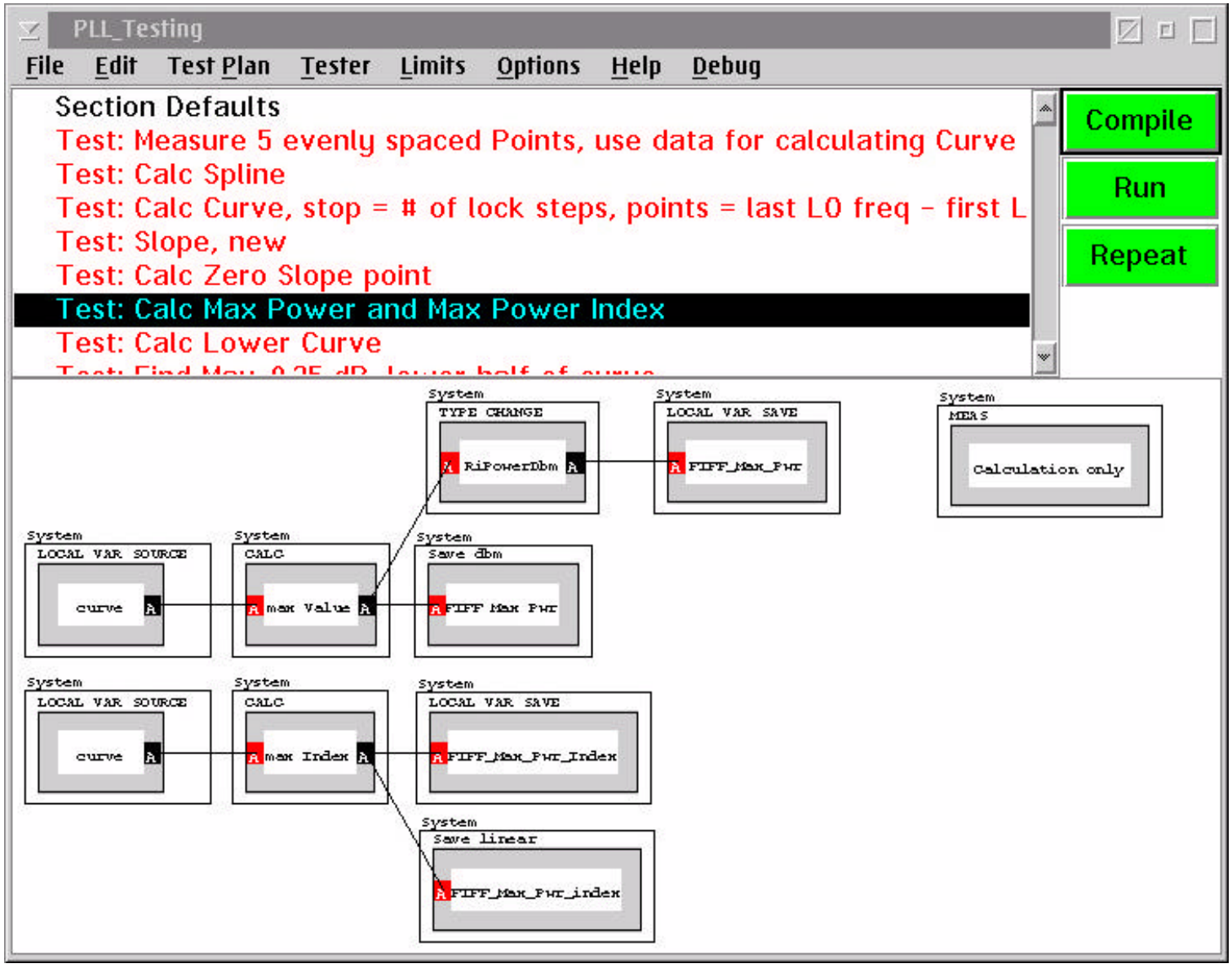
Using the deltas Calculation, Create a Slope Array. The new Array is the Slope of the Curve at every data point.



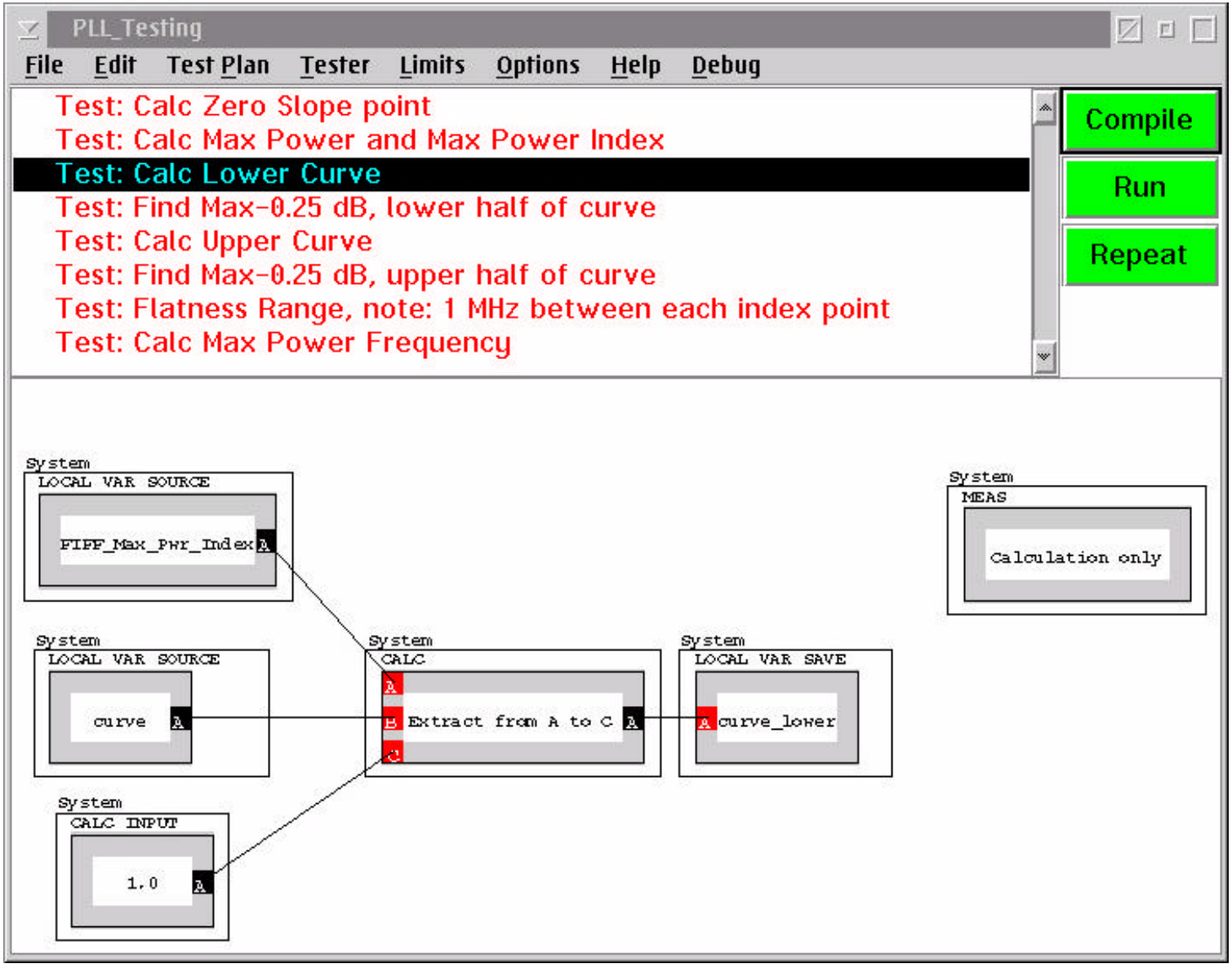
Calculate the Zero Slope Index Point for the Slope Array



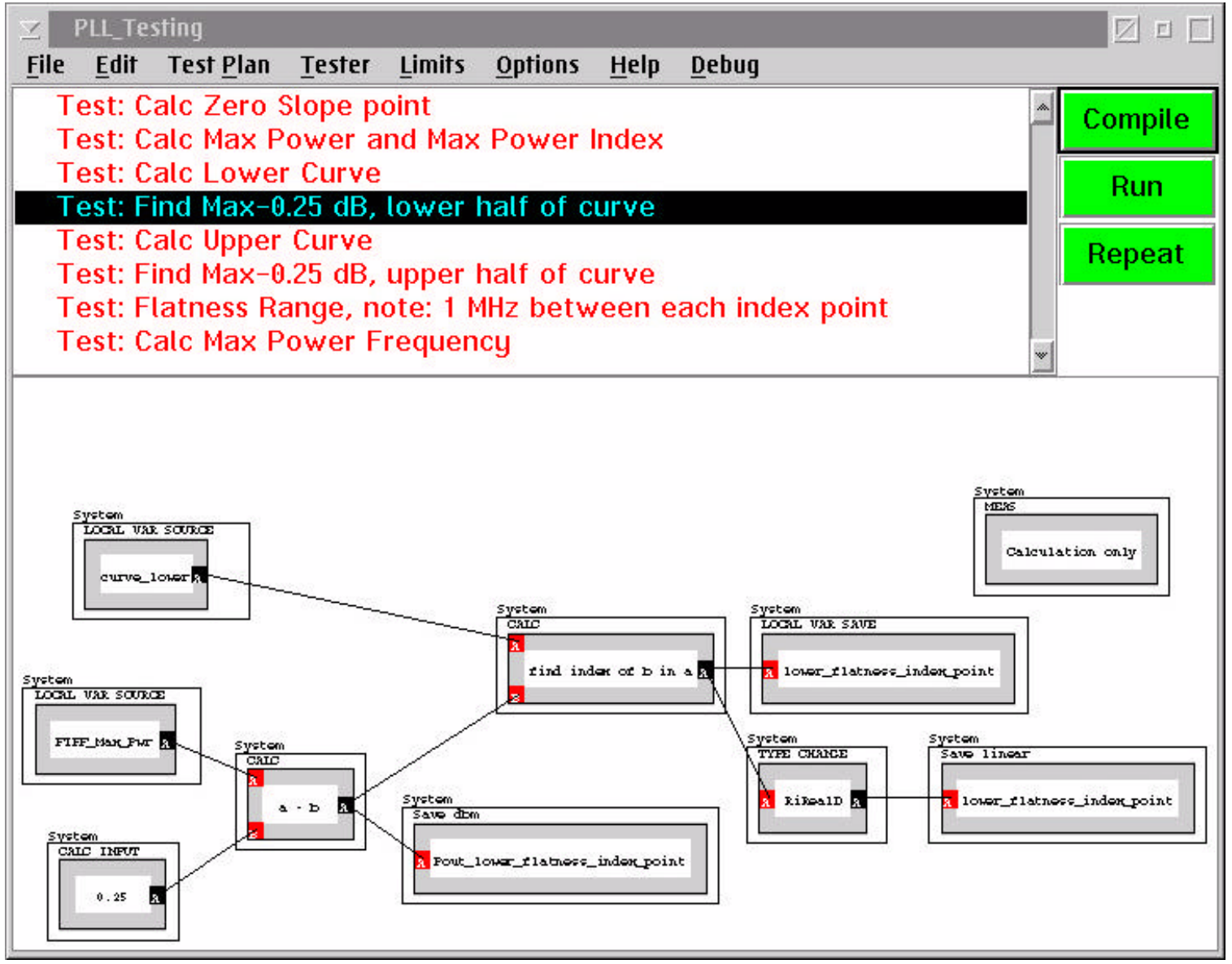
Find the Curve's Maximum Power Value and the Index Point for the Maximum Power Value



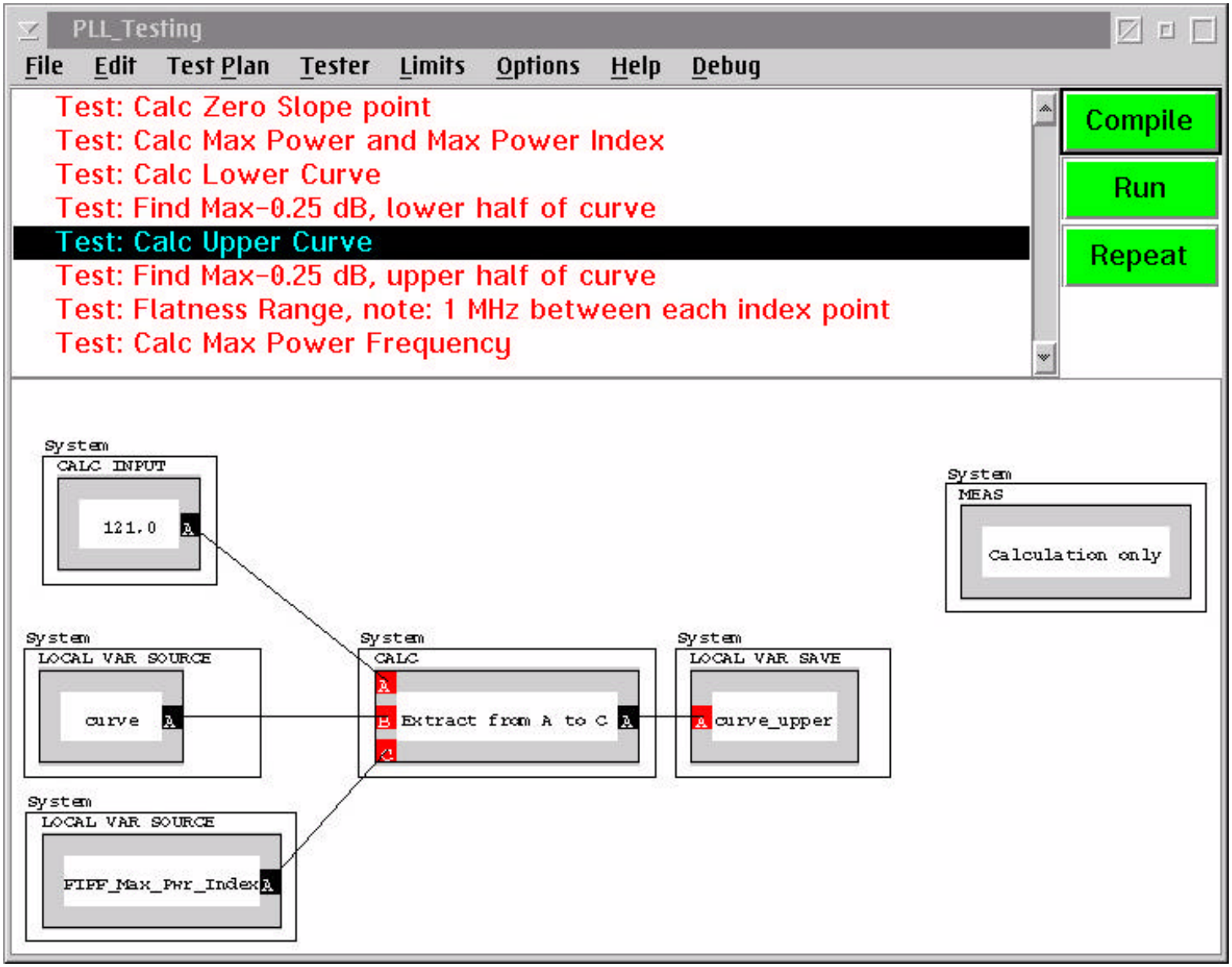
Extract the Data Points for the Lower Part of the Curve (From the 1st Data Point to the Maximum Data Point)



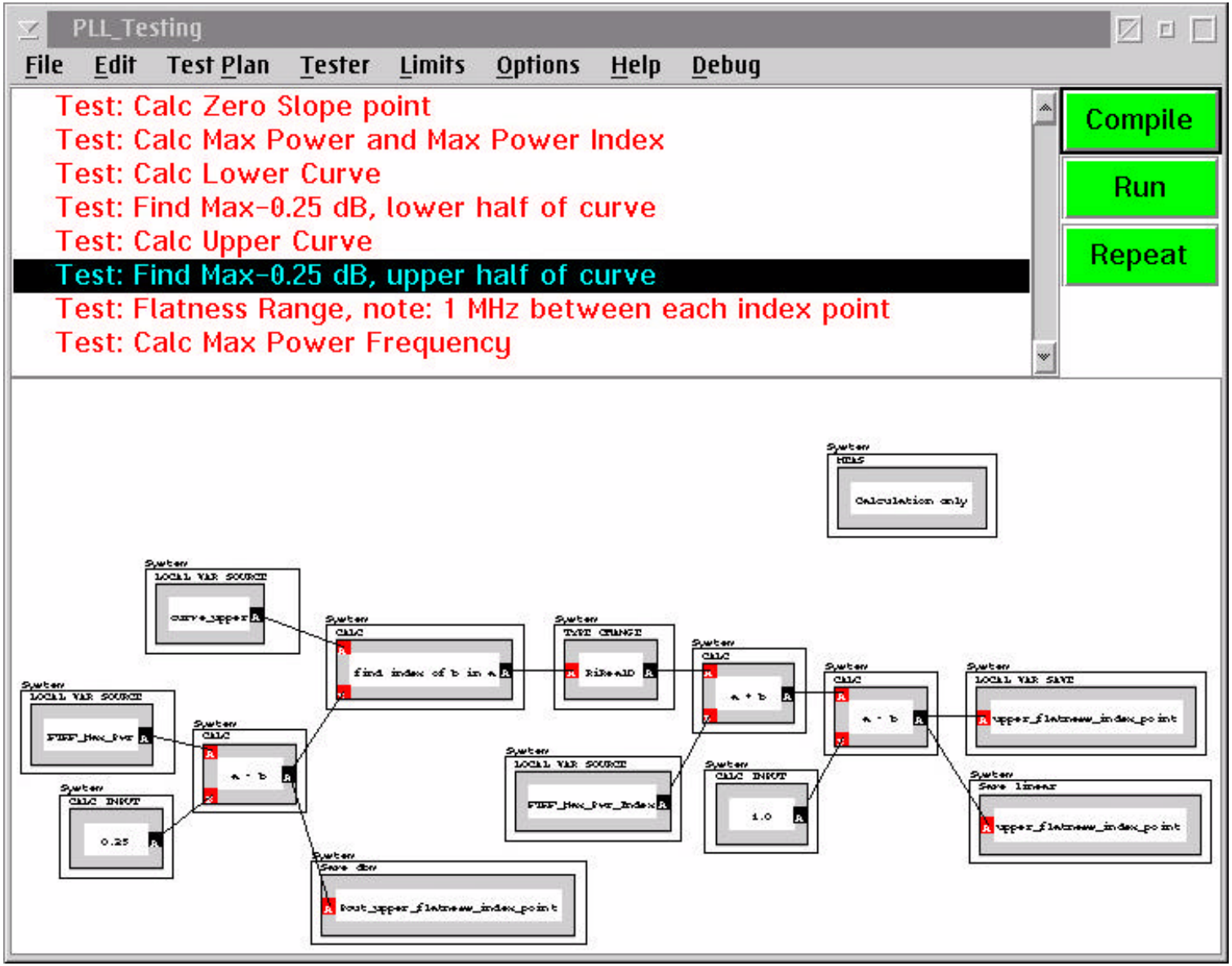
Find the Data Point which is 0.25 dB less than the Maximum Data Point in the Lower Curve



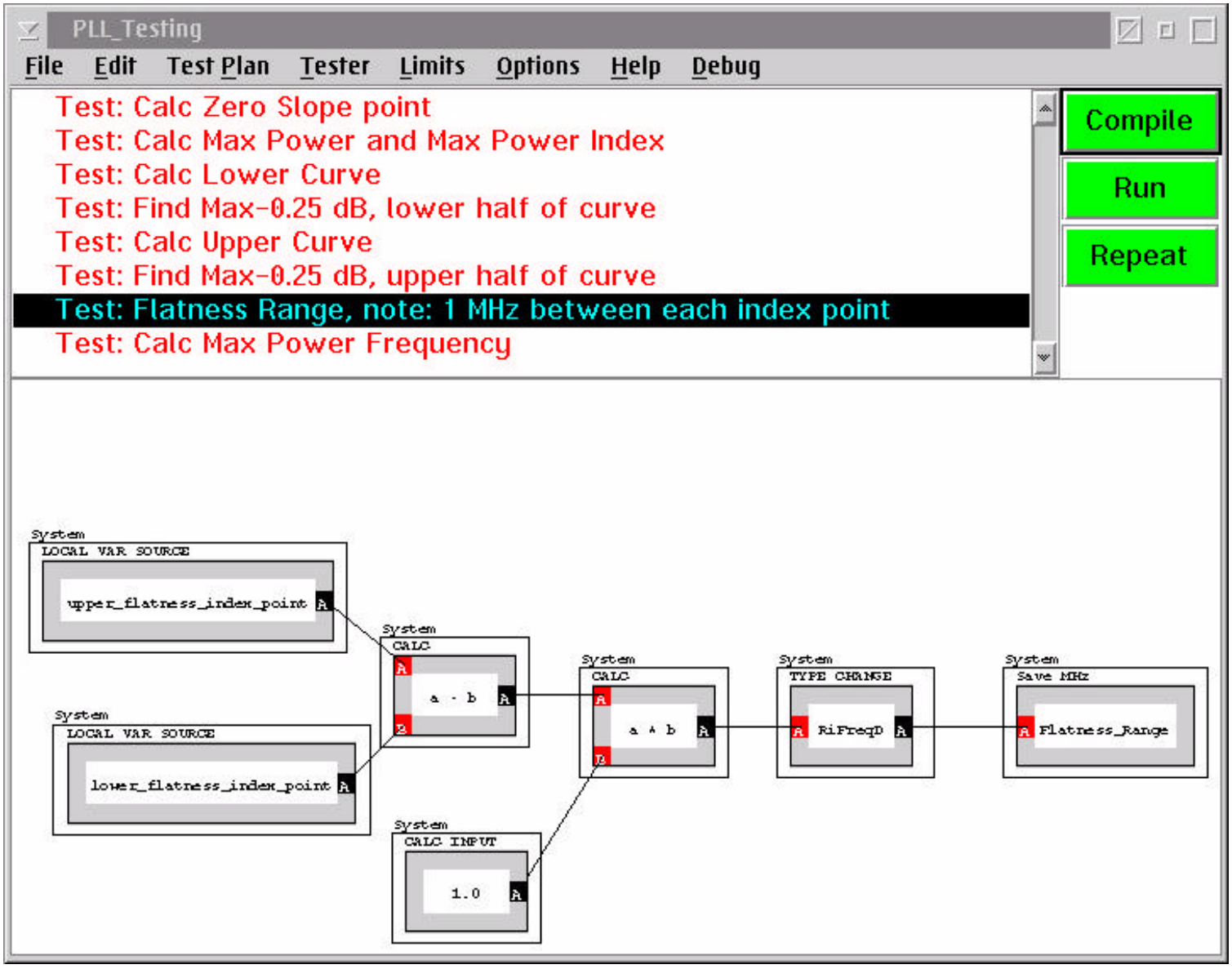
Extract the Data Points for the Upper Part of the Curve (From the Maximum Data Point to the Last Data Point)



Find the Data Point which is 0.25 dB less than the Maximum Data Point in the Upper Curve



Calculate Flatness Range for Curve



Calculate the Maximum Power Frequency Value for the Entire Curve