3. The Implementation

A simple and reliable implementation of such a termination sensing circuit can test the available pull-up current to a standard SCSI signal driver during a bus reset phase and generate the appropriate decision..

During an active power-up reset the termination sensor will pull down one of the SCSI signal lines to less than 0.5 V (e.g. -RST) and measure the pull-up current available. If this current is less than 25 mA ±7% (23.25 mA to 26.75 mA) the terminator B shall be activated.

While the optimum implementation of this circuit can be achieved by integrating it with a controllable terminator, a discrete implementation concept is shown in figure 3, page 2.

The main caveat of the discrete implementation is the load capacitance added to the signal line. The use of -RST line for this purpose can minimize the significance of the problem. Also a confusing situation can occur if such a termination sensing circuit is used in more than one place on the same bus and the power-on reset occurs simultaneous for the two devices.
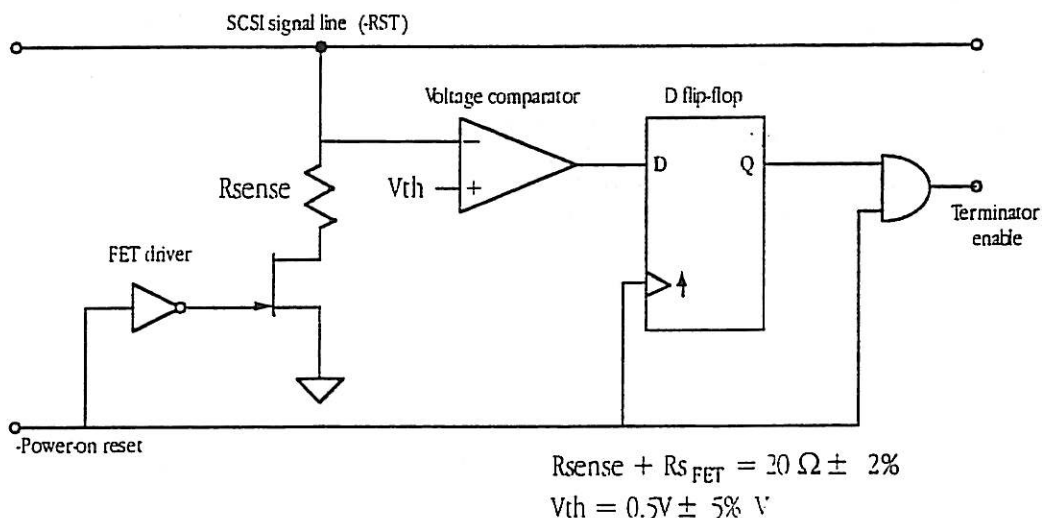

$$Rsense + Rs_{FET} = 20\,\Omega \pm 2\%$$
$$Vth = 0.5V \pm 5\%\ V$$

figure 3

4. Open Issues

Which SCSI signal line should be used ?.
    The proposed line is -RST.
What value should we chose for the decision threshold ?
    The proposed value is 25 mA ± 7%
Protocol issues ?
    Multiple termination sensors on the same bus, multiple successive bus reset signals ...

SCSI
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