



# Application Note

## Bob Smith Termination – Application Note 23-222

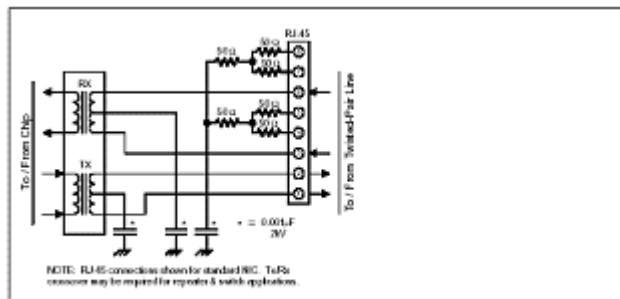
*XMULTIPLE Technologies Bob Smith Termination Circuit Diagram and Description*

**Los Angeles, CA, July 2003 - Bob Smith Termination**

This termination is a (patented) network invented by Bob Smith at Bay Networks which provides common-mode termination of all of the wires in the cable. This is especially important for those wires not connected to signals, since they can respond as parasitic elements. It is described in Patent # 5,321,372.

Many designers provide what is known as a “Bob Smith” termination for the unused pairs on the twisted-pair interface. The termination basically looks like a 100. load, matched to the line, which is bypassed to chassis ground. This termination is added for robustness, although some argue that it is only useful at frequencies below 1 MHz. A typical Bob Smith implementation is shown in

### Bob Smith Termination Circuit



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