Transmission Lines for LVDS

Research Assignement Answers

Q: Using a National Transmission Line Rapidesigner (Lit #6332001-001 English Units) or from the equations listed in AN-905 Appendix - Calculate the Differential Impedance for a coupled pair of 68 Ohm microstrips spaced 12.5 mils apart on a 20 mils thick substrate.

A: Use equation for microstrip differential Zo equation (provided in the Appendix of AN-905) or use National's Rapidesigner to solve. If using the Rapidesigner, the three steps are required:

1. In Diff Zo, set ratio of h/s at 20/12.5, read microstrip factor of 0.735
2. Align Zo of 68 to 0.735 factor
3. Read Zdiff of 100 Ohms