

# **Applications Of SPICE Simulation Software To The Study Of Reliability And Availability In Electrical Engineering Education**

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## **Summary**

The effectiveness of SPICE in calculating probabilities, reliability, steady-state availability, and mean time to failure of repairable systems described by Markov models is demonstrated. Two examples are presented. The first example is a two-unit, warm standby, microcomputer system with self-reset function and repair facility. The second example is a robotic system comprising two identical robots and one safety system. In both cases, the results obtained using SPICE are compared with previously published results obtained using the Laplace transform method. Full SPICE listings are included.

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