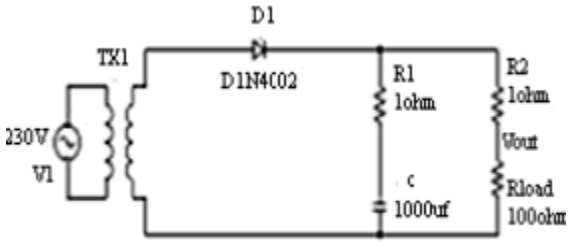
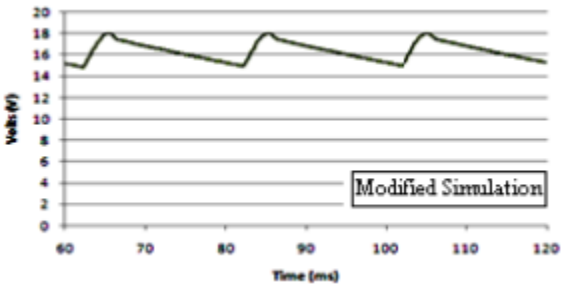
TITLE - SIMPLIFIED HALF WAVE RECTIFIER MODEL SIMULATION USING eSim
STUDENT NAME - SUDHESHNA P
MENTOR NAME - DR. MAHESWARI RAJA
COLLEGE - SRI ESHWAR COLLEGE OF ENGINEERING, COIMBATORE

PROBLEM STATEMENT:

The study focuses on enhancing laboratory simulations of half-wave rectifiers. These rectifiers are crucial in converting AC to DC but accurately simulating them is challenging due to non-ideal characteristics and real-world conditions.
Traditional models often overlook practical factors like diode forward resistance, reverse leakage current, and varying load conditions. This leads to discrepancies between simulated and actual circuit behavior, undermining the reliability of simulations for educational and practical purposes.
In educational settings, inaccurate models can mislead students and novice engineers, affecting their understanding and practical skills. This study proposes a simplified yet accurate half-wave rectifier model for PSpice to improve simulation fidelity, making them more reflective of real-world conditions while maintaining educational simplicity.





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AUTHOR(S):

1. Shikha Porwal, Electronics and Communication, Geetanjali Institute of Technical Studies, RTU (shikha_prwl@yahoo.co.in)
2. Pradeep Chhawchharia, Electronics and Communication, Geetanjali Institute of Technical Studies, RTU (pradch@rediffmail.com)
3. Rajesh Pandey, Department of Physics, MLSU (Udaipur, Rajasthan, India)

REFERENCE:

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