

A Load Independent Tapered RF Harvester

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Abstract: This letter proposes a new matching technique that is based on a network of dual line topology with different characteristic impedances. The purpose of this network is to match the Schottky diode's input impedance in a rectifying circuit with the 50 source impedance. The strength of the proposed technique is based on the fact that it enables a stable efficiency response for different input power levels. It also forces the rectifier to exhibit an almost flat efficiency curve over a wide range of load variations. The proposed circuit is built and measured, where an agreement is attained between simulations and measured results over the IEEE 802.11 b/g bands.