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## Medium voltage range energy harvester application using boost converter

(Article)

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## Abstract

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Energy obtained from the surrounding is usually very low and scarce. Such energy can be found from the vibration, solar and heat to name few. Often this energy is less than 1.5 V. Based on this motivation, DC-DC boost converter circuit is chosen and designed to convert low energy to sufficient amount to be used in normal circuit device and system application. This paper introduces a medium range output voltage using conventional DC-DC boost converter for low input supply range. Simulation has been done and compared with the experiment results. The purpose of this paper is to show the possibility of conversion very low energy to up to 50 V and to discuss a brief operation involved. A linear 4 V to 49 V output voltage trend was obtained from the experiment, under low switching frequency, 2 kHz. The targeted input used in this paper is between 0.1 V to 1.5 V suitable for energy harvesting purpose. © 2006-2015 Asian Research Publishing Network (ARPN).

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[Boost converter](#) [Energy harvesting](#) [Low frequency](#) [Low power consumption](#) [Low voltage](#)

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