Abstract

This paper endeavours to estimate the influence of soft switching on semi-conductor devices' rating, when they are subjected to high frequency applications. In order to find out the extent of saving in semiconductor devices losses, soft switched circuits were studied and analyzed. An experimental set up which could be operated both in hard-switching and soft-switching modes were chosen. Specific switching devices, namely MOSFETs were selected. The ageing of the semiconductor devices was correlated with the rise in temperature of the casing of the devices. The cutoff point for the experiment was the knee region where the thermal runaway would start. This experiment was conducted on two MOSFETs at two frequencies.

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Index Terms

Computer Science

Image Processing

Key words

Soft switching

hard switching

device ageing

temperature rise