ANALYSIS OF SWITCHING-INVARIANT CHARACTERISTICS OF
SOFT-SWITCHING CELLS

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Abstract

In this paper, a model representing the switching invariant properties of soft-switching cells is presented. On the basis of the application of the compensation theorem and of the adoption of the switching cell modeling approach, a cause-effect model of the behavior of six families of switching cells in hard and soft commutations is formulated. Thanks to such model the consequences of the commutation of any switching device (SD) of a cell on the state of all the other SDs is easily allowed in analytical form by exploiting the symbolic toolboxes of the world-wide known software package MATLAB®.