

Mathematical Modelling of a five stages $n^2 + n$ voltage multiplier's output in the time-domain

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Abstract: The time-domain behavior of the $n^2 + n$ voltage multiplier was unknown. In this manuscript, we present an optimized approximate mathematical model for the output voltage of a $n^2 + n$ voltage multiplier. The suggested mathematical model includes two components of an exponential recovery equation and a sinusoidal equation which are performing as a function of time and frequency.

Keywords: Mathematical Modelling, voltage multiplier, time-domain, optimization, non-linear least squares.

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