

The energy and cost calculation for a Marx pulse generator based on input dc voltage, capacitor values and number of stages

ABSTRACT

Visualization of the energy equation can simplify understanding the performance of a Marx pulse generator. In this paper, the energy of a Marx pulse generator is calculated and visualized for input dc voltage from 1 to 20 kV, value of the capacitor from 1 to 33 nF and the number of stages from 1 to 20 stages. Moreover, in order to calculate the approximate cost of the Marx pulse generator, an equation proposed and evaluated.

Keyword: Pulse generator; Energy; Cost; Marx pulse generator; High voltage