

Title (en)
DEVICE FOR PRODUCING CURRENT OR VOLTAGE PULSES

Title (de)
VORRICHTUNG ZUR ERZEUGUNG VON SPANNUNGS- ODER STROMPULSEN

Title (fr)
DISPOSITIF DE PRODUCTION D'IMPULSIONS DE TENSION OU DE COURANT

Publication
EP 0783799 A1 19970716 (DE)

Application
EP 94922233 A 19940809

Priority
• DE 9400925 W 19940809
• DE 4311455 A 19930407

Abstract (en)
[origin: DE4311455A1] The device has an energy store and a switching element. Within the voltage range up to a few hundred volts, fast semiconductors which enable pulses to be generated are available, for example with metal oxide field effect transistors, for constructing such generators. The switching elements only have a small heat capacity. To provide for almost any types of voltage variations with high efficiency and inexpensive construction, coupled resonant circuits are provided as energy stores into which energy can be coupled via a number of switching elements in such a manner that the amplitude of the voltage variations across the resonant circuit capacitances or of the current variations through the resonant circuit inductances corresponds to Fourier coefficients of a development of the required output signal in accordance with the reference frequencies of the resonant circuits. The device enables almost any voltage and current variations to be generated, particularly high-amplitude pulses with steep edges. The device can therefore be manufactured very inexpensively.

IPC 1-7
H03K 12/00

IPC 8 full level
H03K 12/00 (2006.01)

CPC (source: EP)
H03K 12/00 (2013.01)

Citation (search report)
See references of WO 9605653A1

Designated contracting state (EPC)
CH ES FR LI

DOCDB simple family (publication)
DE 4311455 A1 19941013; DE 4311455 C2 19951109; EP 0783799 A1 19970716; WO 9605653 A1 19960222

DOCDB simple family (application)
DE 4311455 A 19930407; DE 9400925 W 19940809; EP 94922233 A 19940809