Title (en)

SWITCHING CONTROL CIRCUIT WITH VARIABLE SWITCHING FREQUENCY FOR PRIMARY-SIDE-CONTROLLED POWER CONVERTERS

Title (de)

SCHALTSTEUEREINHEIT MIT VARIABLER SCHALTFREQUENZ FÜR PRIMERSEITIG GESTEUERTE STOMUMSETZER

Title (fr)

CIRCUIT DE COMMANDE DE COMMUTATION AVEC FREQUENCE DE COMMUTATION VARIABLE POUR CONVERTISSEURS DE PUISSANCE COMMANDES DU COTE PRIMAIRE

Publication

EP 1943717 A4 20111012 (EN)

Application

EP 05795420 A 20051009

Priority

CN 2005001654 W 20051009

Abstract (en)

[origin: WO2007041896A1] The invention presents a switching control circuit for a primary-side-controlled power converter. A pattern generator produces a digital pattern to control a programmable capacitor that is connected to an oscillator, which produces frequency hopping to reduce the EMI. A voltage-waveform detector produces a voltage-feedback signal and a discharge-time signal by multi-sampling a voltage signal of a transformer. A current-waveform detector and an integrator generate a feedback signal. The integration of a current-waveform signal with a timing signal generates the average-current signal. Time constant of the integrator is correlated to the switching frequency. The oscillator generates the timing signal and a pulse signal in response to the output of a current-loop error amplifier. A PWM circuit generates the switching signal in response to the pulse signal and the output of a voltage-loop error amplifier.

IPC 8 full level

H02M 3/22 (2006.01); **H02M 3/335** (2006.01)

CPC (source: EP KR)

H02M 3/22 (2013.01 - KR); **H02M 3/28** (2013.01 - KR); **H02M 3/33507** (2013.01 - EP); **H02M 3/33523** (2013.01 - EP)

Citation (search report)

- [XA] WO 2005011095 A1 20050203 - SYSTEM GENERAL CORP [CN], et al
- [A] US 2005073862 A1 20050407 - MEDNIK ALEXANDER [US], et al
- See references of WO 2007041896A1

Designated contracting state (EPC)

DE NL

DOCDB simple family (publication)

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DOCDB simple family (application)

CN 2005001654 W 20051009; EP 05795420 A 20051009; JP 2008533848 A 20051009; KR 20087010386 A 20051009