Title (en)
SYNCHRONOUS RECTIFIER CIRCUIT AND LLC RESONANCE CONVERTER HAVING THE SAME

Title (de)
SYNCHRONE GLEICHRICHTERSCHALTUNG UND LLC-RESONANZWANDLER DAMIT

Title (fr)
CIRCUIT DE REDRESSEUR SYNCHRONE ET CONVERTISSEUR DE RÉSONANCE LLC LE COMPORTANT

Publication
EP 3161953 A1 20170503 (EN)

Application
EP 15812521 A 20150629

Priority
- CN 201410305285 A 20140627
- CN 2015082619 W 20150629

Abstract (en)
[origin: WO2015197031A1] A synchronous rectifier circuit (101) is provided, comprising: a switch module (10), configured to generate a switch voltage signal; an LLC resonance module (20), configured to generate a first resonance pulse voltage signal according to the switch voltage signal; a transformer (30) comprising a primary winding (T1) and a secondary winding (T2), and configured to convert the first resonance pulse voltage signal into a second resonance pulse voltage signal; a secondary synchronous rectifier module (40) and a reverse current suppression module (50). The secondary synchronous rectifier module (40), the reverse current suppression module (50) and the secondary winding (T2) are connected with each other to form a reverse current suppression loop, the secondary synchronous rectifier module generates a reverse recovery current signal during performing a synchronous rectification to the second resonance pulse voltage signal, and the reverse current suppression loop is configured to suppress the reverse recovery current signal..

IPC 8 full level
H02M 3/335 (2006.01)

CPC (source: EP US)
H02M 3/01 (2021.05 - EP US); **H02M 3/33571** (2021.05 - EP US); **H02M 3/33592** (2013.01 - EP US); H02M 1/0048 (2021.05 - EP); H02M 1/0051 (2021.05 - EP); H02M 1/0058 (2021.05 - EP); Y02B 70/10 (2013.01 - EP); Y02P 80/10 (2015.11 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2015197031 A1 20151230; CN 105207457 A 20151230; CN 105207457 B 20190329; EP 3161953 A1 20170503; EP 3161953 A4 20170621

DOCDB simple family (application)
CN 2015082619 W 20150629; CN 201410305285 A 20140627; EP 15812521 A 20150629