

Title (en)

DEVICE FOR SUPPLYING VOLTAGE TO THE CATHODE OF A MASS SPECTROMETER

Title (de)

VORRICHTUNG ZUR SPANNUNGSVERSORGUNG DER KATHODE EINES MASSENSPEKTROMETERS

Title (fr)

DISPOSITIF POUR ALIMENTER EN TENSION LA CATHODE D'UN SPECTROMÈTRE DE MASSE

Publication

EP 2820668 A2 20150107 (DE)

Application

EP 13707587 A 20130222

Priority

- DE 102012203141 A 20120229
- EP 2013053550 W 20130222

Abstract (en)

[origin: WO2013127701A2] A simplified device for supplying voltage to the cathode of a mass spectrometer has a push-pull converter, a controlled rectifier (8, 10) being present outside the normal rectifier diodes (7, 9). The gate of the first transistor (8) is connected to the second output (30) and the gate of the second transistor (10) to the first output (32) of the transformer. A voltage supply apparatus, consisting of at least one voltage multiplier, is connected to the output of the transformer via capacitors (13, 14, 15) and supplies, inter alia, the emission current measuring apparatus.

IPC 8 full level

H01J 49/02 (2006.01); **H03L 1/00** (2006.01)

CPC (source: EP RU US)

H01J 49/02 (2013.01 - EP US); **H01J 49/10** (2013.01 - US); **H01J 49/02** (2013.01 - RU)

Citation (search report)

See references of WO 2013127701A2

Citation (examination)

- DE 69203845 T2 19960404 - ALCATEL STANDARD ELECTRICA [ES]
- DE 69901918 T2 20030206 - SHINDENGEN ELECTRIC MFG [JP]
- ANONYMOUS: "Spannungsverdoppler - Wikipedia", 15 October 2011 (2011-10-15), XP055698436, Retrieved from the Internet <URL:https://de.wikipedia.org/w/index.php?title=Spannungsverdoppler&oldid=94816920> [retrieved on 20200526]

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)

DE 102012203141 A1 20130829; CN 104094378 A 20141008; CN 104094378 B 20160817; EP 2820668 A2 20150107; EP 2820668 B1 20210505; IN 7154DEN2014 A 20150424; JP 2015513765 A 20150514; JP 6291424 B2 20180314; RU 2014138553 A 20160420; RU 2638303 C2 20171213; TW 201342421 A 20131016; TW I590295 B 20170701; US 2015028743 A1 20150129; US 9530634 B2 20161227; WO 2013127701 A2 20130906; WO 2013127701 A3 20140130

DOCDB simple family (application)

DE 102012203141 A 20120229; CN 201380007996 A 20130222; EP 13707587 A 20130222; EP 2013053550 W 20130222; IN 7154DEN2014 A 20140826; JP 2014559156 A 20130222; RU 2014138553 A 20130222; TW 102106818 A 20130227; US 201314381171 A 20130222