

Title (en)
PHOTOVOLTAIC POWER GENERATION SYSTEM FREE OF BYPASS DIODES

Title (de)
SYSTEM ZUR PHOTOVOLTAISCHEN ENERGIEERZEUGUNG OHNE BYPASSDIODEN

Title (fr)
SYSTÈME DE PRODUCTION D'ÉNERGIE PHOTOVOLTAÏQUE SANS DIODES DE DÉRIVATION

Publication
EP 2870636 A4 20160316 (EN)

Application
EP 13812821 A 20130702

Priority

- US 201213543297 A 20120706
- US 2013049165 W 20130702

Abstract (en)
[origin: WO2014008313A2] A photovoltaic power generation system that includes a solar panel that is free of bypass diodes is described herein. The solar panel includes a plurality of photovoltaic sub-modules, wherein at least two of photovoltaic sub-modules in the plurality of photovoltaic sub-modules are electrically connected in parallel. A photovoltaic sub-module includes a plurality of groups of electrically connected photovoltaic cells, wherein at least two of the groups are electrically connected in series. A photovoltaic group includes a plurality of strings of photovoltaic cells, wherein a string of photovoltaic cells comprises a plurality of photovoltaic cells electrically connected in series. The strings of photovoltaic cells are electrically connected in parallel, and the photovoltaic cells are microsystem-enabled photovoltaic cells.

IPC 8 full level
H01L 31/042 (2006.01)

CPC (source: CN EP KR)
H01L 31/042 (2013.01 - CN EP); **H01L 31/0504** (2013.01 - CN EP KR); **H02S 40/36** (2014.12 - KR); **Y02E 10/50** (2013.01 - EP); **Y02E 10/56** (2013.01 - KR)

Citation (search report)

- [I] WO 2011089607 A1 20110728 - WATELMACHER BORIS [IL]
- [I] US 2010170556 A1 20100708 - FROLOV SERGEY [US], et al
- [XY] LENTINE A L ET AL: "Optimal cell connections for improved shading, reliability, and spectral performance of microsystem enabled photovoltaic (MEPV) modules", 35TH IEEE PHOTOVOLTAIC SPECIALISTS CONFERENCE (PVSC), 20-25 JUNE 2010, HONOLULU, HI, USA, IEEE, PISCATAWAY, NJ, USA, 20 June 2010 (2010-06-20), pages 3048 - 3054, XP031784064, ISBN: 978-1-4244-5890-5
- [Y] JOSE L CRUZ-CAMPA ET AL: "Ultrathin Flexible Crystalline Silicon: Microsystems-Enabled Photovoltaics", IEEE JOURNAL OF PHOTOVOLTAICS, I E E E, US, vol. 1, no. 1, 1 July 2011 (2011-07-01), pages 3 - 8, XP011387321, ISSN: 2156-3381, DOI: 10.1109/JPHOTOV.2011.2162973
- [A] MOHAMMED KHORSHED ALAM ET AL: "Interconnection and optimization issues of multijunction solar cells A new mitigation approach using switching power converters", APPLIED POWER ELECTRONICS CONFERENCE AND EXPOSITION (APEC), 2012 TWENTY-SEVENTH ANNUAL IEEE, IEEE, 5 February 2012 (2012-02-05), pages 583 - 589, XP032127728, ISBN: 978-1-4577-1215-9, DOI: 10.1109/APEC.2012.6165878
- See references of WO 2014008313A2

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DOCDB simple family (publication)
WO 2014008313 A2 20140109; WO 2014008313 A3 20140403; CN 104508834 A 20150408; CN 104508834 B 20160921; EP 2870636 A2 20150513; EP 2870636 A4 20160316; JP 2015522215 A 20150803; JP 2016149582 A 20160818; JP 6010694 B2 20161019; KR 101638753 B1 20160711; KR 20150036356 A 20150407

DOCDB simple family (application)
US 2013049165 W 20130702; CN 201380035972 A 20130702; EP 13812821 A 20130702; JP 2015520666 A 20130702; JP 2016102964 A 20160524; KR 20157002917 A 20130702