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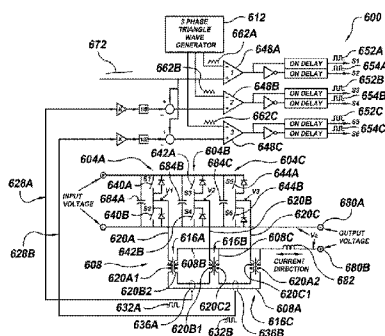
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(54) Title: MULTIPHASE POWER CONVERTERS AND MULTIPHASE POWER CONVERTING METHODS



(57) Abstract: A new class of multiphase converters having at least two switching cells driven by out-of-phase PWM reference signals and corresponding respective PWM control signal signals. In some embodiments, ones of the switching cells are driven as a function current-balancing feedback so as to balance the currents between the switching cells. Various embodiments of the multiphase converter include one or more unique transformers for averaging the output of the switching cells.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/77701

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H02M 1/12; G05F 1/00 (2008.01)

USPC - 363/41; 323/282

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC - 363/41; 323/234, 229, 271, 282

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 363/41; 323/234, 229, 271, 282

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (USPT, PGPB, EPAB, JPAB); DialogPRO (Engineering); Google Scholar

Search term: multiphase power converter, multiple phase, switching, transformer, multi winding, feedback loop, pulse width modulation

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0071649 A1 (SCHROM et al.) 06 April 2006 (06.04.2006), fig 1-2, para [0021] - [0022]	1, 4, 6 ----- 2-3, 5, 7-20, 27-28
X --- Y	US 2005/0225307 A1 (SATO et al.) 13 October 2005 (13.10.2005), fig 5, para [0032]-[0034]	21-26 ----- 2-3, 5, 7, 9-20, 27-28
Y	US 2006/0023476 A1 (FOSLER) 02 February 2006 (02.02.2006), fig 3-4, para [0079]	8-10, 19

Further documents are listed in the continuation of Box C.

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"P" document published prior to the international filing date but later than the priority date claimed

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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