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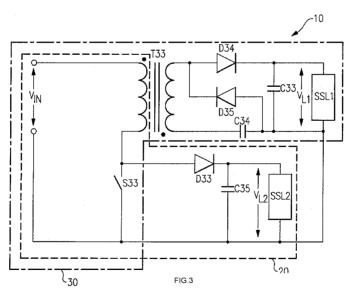
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(54) Title: CIRCUITRY FOR SUPPLYING ELECTRICAL POWER TO LOADS



(57) Abstract: A power supply, comprising a boost converter which provides voltage to a first load, and a flyback converter which provides voltage to a second load and which utilizes an inductive element of the boost converter as a primary winding of a transformer of the flyback converter. Also, a power supply comprising a MOSFET which is disposed between solid state elements and a second reference potential and which controls current flowing through the solid state elements. Also, a circuit comprising a transformer, a first circuit portion comprising the primary winding of the transformer and a second circuit portion comprising the secondary winding of the transformer. Also, a power supply comprising means for using a common transformer for providing a boost converter and a flyback converter. Also, a power supply comprising a transformer, means for providing a boost converter utilizing the transformer, and means for providing a flyback converter utilizing the transformer.





70 2008/033987

#### INTERNATIONAL SEARCH REPORT

International application No PCT/US2007/078368

A. CLASSIFICATION OF SUBJECT MATTER INV. H02M3/335 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) HO2M Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Category\* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Χ US 5 973 483 A (JO SANG-SOO [KR]) 1,8,9, 26-October 1999 (1999-10-26) 22,23 Υ 2-6,9-22 column 1, line 25 - column 2, line 10 figure 1 Υ JP 10 233669 A (MATSUSHITA ELECTRIC WORKS 2-6,9-22 LTD) 2 September 1998 (1998-09-02) X abstract GB 2 249 840 A (HESSAMI ALIREZA GHAZI 2-6,9-22 HESSAMI ALIREZA GHAZI [GB]) 20 May 1992 (1992-05-20) X abstract figure 2 Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) 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 docudocument referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 21 January 2008 04/07/2008 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Roider, Anton Fax: (+31-70) 340-3016

### International application No. PCT/US2007/078368

## INTERNATIONAL SEARCH REPORT

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Claims Nos.:     because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:
4. X No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-6, 8-23
Remark on Protest  The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
No protest accompanied the payment of additional search fees.

# FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6,8-23 "

power converter constituted by a flyback converter and a boost converter sharing a common inductor

2. claim: 7

 ${\tt MOSFET}$  current switching circuit for controlling current flowing through LEDs

## INTERNATIONAL SEARCH REPORT

Information on patent family members

international application No.
PCT/US2007/078368

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5973483	Α	26-10-1999	NONE		
JP 10233669	Α	02-09-1998	NONE		
GB 2249840	Α	20-05-1992	NONE		