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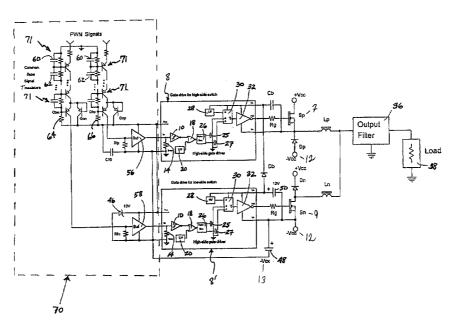
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(54) Title: HALF-BRIDGE GATE DRIVER CIRCUIT



(57) Abstract: A half-bridge gate driver cicuit including two separate floating high-side driver cicuits (8 and 8') for operating a switch cicuit having a high-side switch (7) and a low-side swich (9). Each of the driver cicuits (8 and 8') include input control logic wich is referenced to a supply signal with a potential that becomes negative relative to the negative common terminal (12) of the switches, thereby enchancing the operation of the switch cicuit. The circuit may further include signal translation stages (70) for translation control signals to the control logic of the driver cicuits (8 and 8'). The signal translation stages (70) include a plurality of cascoded parasitic transistor (71) which provide a neutralizing capacitance to minimize noise.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

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a. classification of subject matter IPC 7 H02M1/08 H02M H03K17/687 H02M7/537 H03K17/06 H03F3/217 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 HO3K H03F 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, PAJ C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. χ GB 2 300 532 A (INT RECTIFIER CORP) 1 - 106 November 1996 (1996-11-06) page 8, line 21 -page 13, line 26; figure X EP 0 531 941 A (OTIS ELEVATOR CO) 1 17 March 1993 (1993-03-17) column 3, line 18 -column 4, line 11; 2 - 10Α figure 1 US 5 657 219 A (STANLEY GERALD R) Α 1 - 1012 August 1997 (1997-08-12) the whole document Α US 5 570 062 A (DENT PAUL W) 1,5 29 October 1996 (1996-10-29) column 7, line 30 -column 9, line 42; figure 2 χ Further documents are listed in the continuation of box C. Patent family members are listed in 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 "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date "L" 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) involve an inventive step when the document is taken alone "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. "O" document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 5 June 2003 17/06/2003 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2

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