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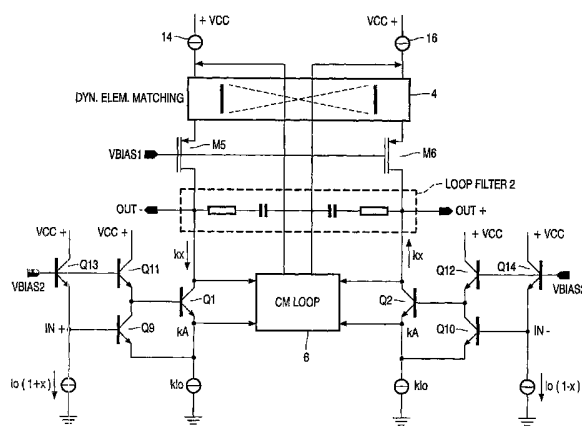
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- (74) Agent: DUIJVESTIJN, Adrianus, J.; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
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- (71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
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- (72) Inventor: SANDULEANU, Mihai, A., T.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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.

(54) Title: DIFFERENTIAL CHARGE PUMP



(57) Abstract: The present invention relates to a differential charge pump, in particular for use in a tuning system including a phase-locked loop, for generating currents, comprising a first input (IN+) and an inverse second input (IN-), in particular for receiving differential signals from a phase comparator, first current source means (Q1) for generating a first current (kIo) in accordance with the signal inputted into said first input (IN+), second current source means (Q2) for generating an inverse second current (kIo) in accordance with the signal inputted into said second input (IN-); and a first output (OUT+) and a second output (OUT-) for outputting said first and second currents, respectively. Further, the differential charge pump comprises a first controllable common mode current source means (14) for additionally feeding common mode current to said first output (OUT+), a second controllable common mode current source means (16) for additionally feeding common mode current (IBIAS2) to said second output (OUT-), and common mode controlling means (6) for controlling said first and second common mode current source means (14, 16) so as to make the common mode currents essentially equal to the currents (kIo) generated by said first and second current source means (Q1, Q2), respectively.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H03F H03L

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, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 483 194 A (GENEST PIERRE) 9 January 1996 (1996-01-09) column 4, line 59 -column 7, line 49; figures	1,2,4,6, 7,9, 13-17
Y	---	3
Y	US 5 781 036 A (MCCARROLL BENJAMIN J ET AL) 14 July 1998 (1998-07-14) column 1, line 51 -column 2, line 52; figure 2	3
X	WO 00 60740 A (LIANG GUOJIN ;RUETZ J ERIC (US); S3 INC (US)) 12 October 2000 (2000-10-12) page 1, line 8 - line 13 page 3, line 13 -page 7, line 36 figures	1-3,9, 13-17

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- *&* document member of the same patent family

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Balbinot, H

INTERNATIONAL SEARCH REPORT

Information on patent family members

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