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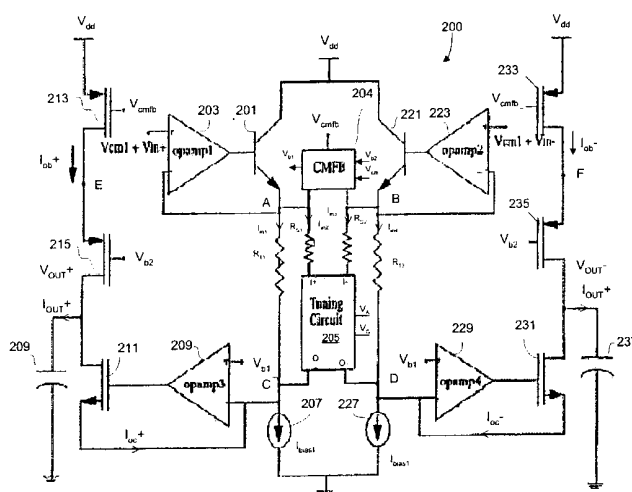
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(54) Title: AN ULTRA LINEAR HIGH FREQUENCY TRANSCONDUCTOR STRUCTURE



(57) Abstract: A transducer block including a Czarnul tuning network, transconductance resistors, an input voltage follower amplifier, a common mode circuit, PMOS transistors couples in cascode configuration, an input current source, and high gain amplifiers that drive NMOS transistors at the output. The input voltage follower amplifier receives a differential input signal including a common mode voltage and applies the differential input signal to the Czarnul tuning network. The Czarnul tuning network includes series resistors and is coupled in parallel with the transconductance resistors. The common mode circuit receives the differential input signal and a reference common mode voltage and provides a bias voltage and a common mode output PMOS transistors to establish a DC output current and to minimize drift of the common mode voltage of the transconductance block. Also, the bias voltage is level shifted from the common mode signal. The high gain amplifiers maintain the output of the Czarnul tuning network and transconductance resistors at the bias voltage.

INTERNATIONAL SEARCH REPORT

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B. FIELDS SEARCHED

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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)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 280 999 A (MOTOROLA INC) 15 February 1995 (1995-02-15) page 3, line 26 -page 7, line 25; figures 1,2	1,4-6,9
Y	EP 0 651 502 A (ALCATEL MOBILE COMM FRANCE) 3 May 1995 (1995-05-03) column 8, line 50 -column 10, line 28; figures 3,4	1,4-6,9
A	EP 0 821 473 A (NORTHERN TELECOM LTD) 28 January 1998 (1998-01-28) column 6, line 4 -column 8, line 20; figures 5,6	2,3,10, 11



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Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

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