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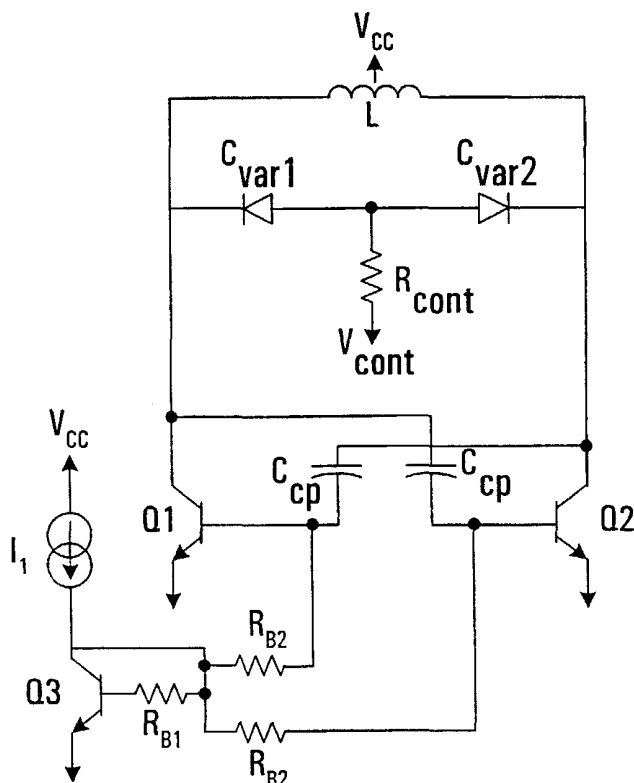
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[Continued on next page]

(54) Title: A LOW VOLTAGE VOLTAGE-CONTROLLED OSCILLATOR TOPOLOGY



(57) Abstract: Recent trends have seen the desire for lower and lower supply voltages in radio frequency (RF) components as this leads to lower power consumption and, therefore, longer battery life. As well, lower voltages and less current means that mobile products can be made to require fewer battery cells leading to lighter, more compact devices. The present invention discloses a novel topology for providing a low-voltage voltage-controlled oscillator (VCO). The novel topology is based on the negative transconductance oscillator. However, the novel topology of the invention eliminates transistor "stacking" in the oscillator circuit, thereby allowing the oscillator circuit to be operated at a supply voltage only slightly higher than the turn-on voltage for a single transistor.



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INTERNATIONAL SEARCH REPORT

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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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)

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.
A	BORREMANS M ET AL: "PHASE NOISE UP-CONVERSION REDUCTION FOR INTEGRATED CMOS VCOS" ELECTRONICS LETTERS, IEE STEVENAGE, GB, vol. 36, no. 10, 11 May 2000 (2000-05-11), pages 857-858, XP000963910 ISSN: 0013-5194 right-hand column, line 19 - line 50; figures 1B,2A	1,5,6,8
A	US 5 937 340 A (JOVENIN FABRICE ET AL) 10 August 1999 (1999-08-10) column 3, line 20 - line 65; figure 1 --- -/--	1,5-7,13

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LEONG J ET AL: "A 2.7-V 900-MHZ/1.9-GHZ DUAL-BAND TRANSCEIVER IC FOR DIGITAL WIRELESS COMMUNICATION" IEEE JOURNAL OF SOLID-STATE CIRCUITS, IEEE INC. NEW YORK, US, vol. 34, no. 3, March 1999 (1999-03), pages 286-291, XP000887493 ISSN: 0018-9200 page 288, right-hand column, line 9 - last line ----	1,5-7,13
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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