SELF-BIASED AMPLITUDE-CONTROLLED OSCILLATOR WITH CONSTANT HARMONIC CONTENT

Abstract: Oscillators are described that have a highly stable output frequency versus the variation of supply voltage and different operating conditions such as temperature. The concepts are broadly applicable to various types of oscillators. The highly stable output is achieved with the use of self biasing loops. The circuits associated with providing constant harmonic output current can be used with the concept of a phi-null oscillator to further stabilize the output frequency.

[Continued on next page]
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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INTERNATIONAL APPLICATION NO.
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A. CLASSIFICATION OF SUBJECT MATTER
IPC(8)- H03L 7/00 (2013.01)
USPC - 331/1 76

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)
IPC(8)- H03B 5/32; H03L 7/00, 08 (2013.01)
USPC - 327/147, 331/8, 176

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G05F 3/30; H03F 2200/36; H03L 1/026 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Orbit, Google Patents, Google Scholar, IEEE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 7,961,060 B1 (MCMENAMY et al) 14 June 2011 (14.06.2011) entire document</td>
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<tr>
<td>A</td>
<td>US 2009/0212877 A1 (OGASAWARA) 27 August 2009 (27.08.2009) entire document</td>
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Further documents are listed in the continuation of Box C.

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