Abstract: An amplifier stage capable of delivering a peak limited voltage pulse with sharp transitions, at a desired width and duty cycle, and with high efficiency is disclosed. One disclosed embodiment relates to a circuit that includes a tuned class D amplifier that receives an input signal and generates a pulsed RF output signal in response to the input signal. The pulsed RF output signal has a greater power than that of the input signal.
Date of publication of the international search report:
25 September 2008
## A. CLASSIFICATIONS SUBJECT MATTER

**INV. 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)

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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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</table>

Further documents are listed in the continuation of Box C. See patent family annex.

### Date of the actual completion of the international search

25 April 2008

### Date of mailing of the international search report

04/08/2008

Name and mailing address of the ISA

Agerbaek, Thomas

European Patent Office, P.B. 5818 Patentaan 2 NL-2280 HV Rijswijk

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Authorized officer

Form PCT/ISA/210 (second sheet) (April 2005)
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<td>US 2006/170043 A1 (LIU YAN-FEL [CA] ET AL) 3 August 2006 (2006-08-03) figures 12,13</td>
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<td>WO 03/041249 A (SHAKTI SYSTEMS INC [US]) 15 May 2003 (2003-05-15) figures 2-8</td>
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<td>WO 2005/025065 A (PHILIPS INTELLECTUAL PROPERTY [DE]; KONINKL PHILIPS ELECTRONICS NV [NL]) 17 March 2005 (2005-03-17) figures 1-3</td>
<td>1-6, 8-13, 15-23</td>
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**INTERNATIONAL SEARCH REPORT**

**Box No. II  Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.☐ Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2.☐ Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3.☐ Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III  Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

*see additional sheet*

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

*See annex*

**Remark on Protest**

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (April 2005)
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-23

   Tuned class-D amplifier generating a pulsed RF output.

2. claims: 24-43

   Push-pull class-D amplifier having different duty cycles for the push and pull transistors and generating a pulsed RF output.
<table>
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<tr>
<td>US 2006170043 A1</td>
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