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Declaration under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

[Continued on next page]

(54) Title: PULSE WIDTH MODULATION CIRCUIT AND CLASS-D AMPLIFIER COMPRISING THE PWM CIRCUIT

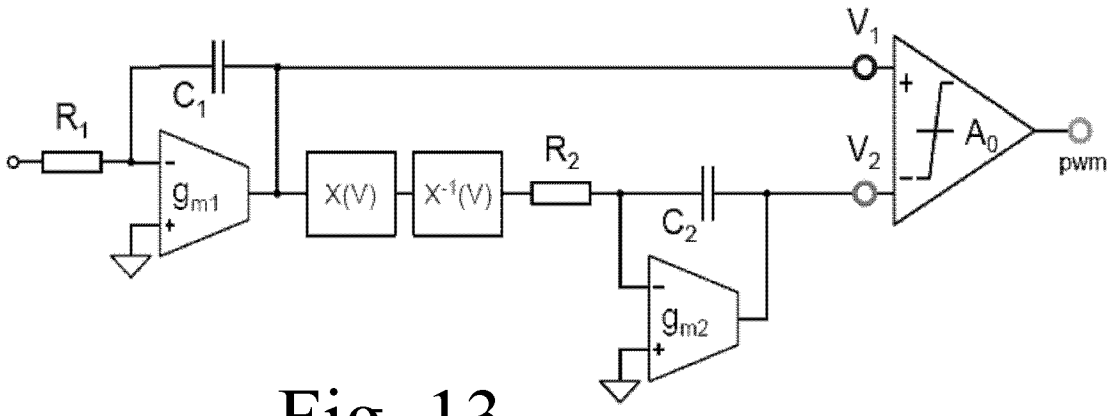


Fig. 13

(57) Abstract: Apulse width modulation (PWM) circuit comprises a first integrator (g m1) witha first feedback capacitor (C_1), a second integrator (g_{m1}) with a second feedback capacitor (C_2) and a comparator (A_0) having a first input (V_1) connected to the output of the first integrator (g_{m1}) and a second input (V_2) connected to the output of the second integrator (g_{m2}). A connection path comprising a resistor (R_2) is established from the output of the first integrator (g_{m1}) to an input of the second integrator (g_{m2}). The first and second feedback capacitors (C_1, C_2) have capacities witha non-linear factor X(V) and a circuit with an inversely non-linear factor $X^{-1}(V)$ is arranged in the connection path between the output of the first integrator (g_{m1}) and said input of the second integrator (g_{m2}). The PWM circuit may formpath of a Class-D amplifier.

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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

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)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BERKHOUT M: "AN INTEGRATED 200-W CLASS-D AUDIO AMPLIFIER" IEEE JOURNAL OF SOLID-STATE CIRCUITS, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 38, no. 7, 1 July 2003 (2003-07-01), pages 1198-1206, XP001169604 ISSN: 0018-9200 cited in the application	1-4,8,9
Y	page 1199, left-hand column, line 5 - page 1200, right-hand column, line 4; figures 1,4	5-7
Y	US 3 316 497 A (BROOKS ROBERT R) 25 April 1967 (1967-04-25) column 2, lines 57-72; figures 1-3	5-7

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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International application No
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A	US 3 654 563 A (HESLER JOSEPH P ET AL) 4 April 1972 (1972-04-04) column 2, line 43 - column 7, line 48; figures 1,6	1-9
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International application No
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