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- (71) Applicant (for all designated States except US): **SAM-SUNG ELECTRONICS CO., LTD.** [KR/KR]; 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742 (KR).
- (72) Inventor: **PARK, Hae-Kwang**; 303-801 Cheongmyeong Maeul 3-danji Daewoo Apt., Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-737 (KR).
- (74) Agent: **Y.P.LEE, MOCK & PARTNERS**; Koryo Building, 1575-1, Seocho-dong, Seocho-gu, Seoul 137-875 (KR).

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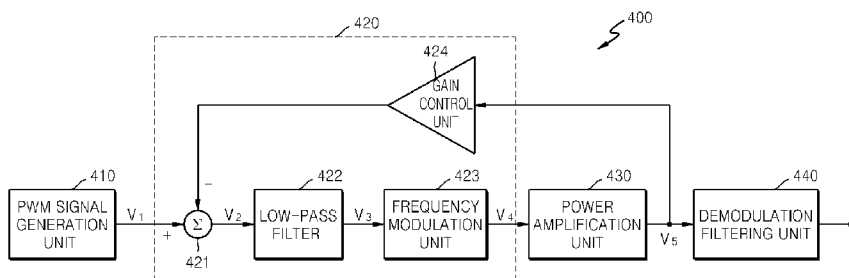
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(54) Title: SWITCHING POWER AMPLIFIER AND METHOD OF CONTROLLING THE SAME

FIG. 4



(57) Abstract: A switching power amplifier having a pulse width modulation (PWM) signal generation unit that converts an input audio signal into a PWM signal with a predetermined carrier frequency, a correction unit that corrects the difference between an audio signal included in the PWM signal and a negative feedback output audio signal to generate a corrected PWM signal, a low pass filter that removes a high-frequency component from the corrected PWM signal, a frequency modulation unit that modulates the corrected PWM signal so that the corrected PWM signal has a switching frequency different from the carrier frequency of the input PWM signal to generate a modulated PWM signal, and a power amplification unit that amplifies a power of the modulated PWM signal.



A. CLASSIFICATION OF SUBJECT MATTER**H03F 3/217(2006.01)i**

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 3/217; H03F 3/38; H03M 1/66

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

(Chinese Patents and application for patent)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: switching power amplifier,PWM,PCM,frequency modulation,corrected PWM,gain control unit,low pass filter,DAC,negative feedback

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1653604 A1 (CAMCO PRODUKTIONS- UND VERTRIEBS GMBH) 03 May 2006 See Fig.5, Claims 1-24	1-15
A	US 2002-0036579 A1 (ANTONIO GROSSO et al.) 28 March 2002 See Fig.1, Claims 1-19	1-15
A	US 2002-0053945 A1 (BRUNO JOHAN GEORGES PUTZEYS) 09 May 2002 See Fig.4, Claims 1-11	1-15

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

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Authorized officer

JUNG, BYEONG HONG

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