

(51) International Patent Classification:
H03F 3/20 (2006.01) *H03F 3/24* (2006.01)(21) International Application Number:
PCT/SG2009/000109(22) International Filing Date:
31 March 2009 (31.03.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/040,754 31 March 2008 (31.03.2008) US(71) Applicant (for all designated States except US): **AGENCY FOR SCIENCE, TECHNOLOGY & RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ZHOU Yijun** [CN/SG]; IPTO1 Institute for Infocomm Research, 1 Fusionopolis Way, #21-01 Connexis, South Tower, Singapore 138632 (SG). **CHIA Yan Wah Michael** [SG/SG]; IPTO1 Institute for Infocomm Research, 1 Fusionopolis Way, #21-01 Connexis, South Tower, Singapore 138632 (SG).(74) Agent: **FOO MOO KWANG**; Axis Intellectual Capital Pte Ltd, 21A Duxton Road, Singapore 089487 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: HIGH EFFICIENCY LINEAR AMPLIFIER

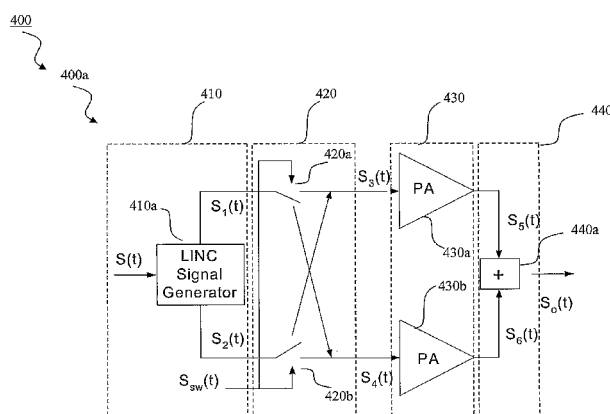


Fig. 4a

(57) **Abstract:** A high efficiency linear amplifier is disclosed. The amplifier comprises an input module having an input coupled to receive an input signal, a first output configured to provide a first signal component, and a second output configured to provide a second signal component. The amplifier also comprises a switching module having a switch input coupled to receive a switch signal, a first input coupled to the first output of the input module, a second input coupled to the second output of the input module, and at least a first output configured to provide a first composite signal. The amplifier further comprises an amplifier module having at least a first input coupled to the first output of the switching module and at least a first output, wherein the first and second signal components comprise constant envelope phase varying signals having different phase relationships and which correspond to the input signal, and wherein the first composite signal comprises temporally sequenced portions of the first and second signal components.