

Title (en)

AMPLIFIER WITH DYNAMICALLY ADAPTABLE SUPPLY CURRENT

Title (de)

VERTSÄRKER MIT DYNAMISCH ANPASSBAREM VERSORGUNGSSTROM

Title (fr)

AMPLIFICATEUR AVEC COURANT D'ALIMENTATION A ADAPTATION DYNAMIQUE

Publication

EP 1095449 A1 20010502 (EN)

Application

EP 99922981 A 19990507

Priority

- US 9910439 W 19990507
- US 8077398 A 19980518
- US 8081198 A 19980518
- US 8081298 A 19980518

Abstract (en)

[origin: WO9960698A1] An adaptable DC power consumption circuit (50) is provided with a feedback control loop (78) formed between the power terminal and the control terminal of the RF amplifier (52). A controller (60) influences the feedback control loop to properly set the supply current at the desired minimum level necessary to maintain linear operation of the RF amplifier. The output of the RF amplifier influences the feedback control loop to dynamically vary the supply current from the desired level. Another feedback control loop is formed between the power terminal and a control terminal of a variable voltage supply. The controller influences the feedback control loop to properly set the supply voltage at the desired minimum level necessary to maintain linear operation of the RF amplifier. The output of the RF amplifier influences the feedback control loop to dynamically vary the supply voltage from the desired level. The controller alternately operates the RF amplifier during a high RF output power condition, and bypasses the RF amplifier during a low RF output power condition. In this manner, linear operation of the RF amplifier can be maintained while maximizing the power efficiency of the RF amplifier.

IPC 1-7

H03G 3/30; **H03F 1/02**; **H03G 3/20**

IPC 8 full level

H03F 1/02 (2006.01); **H03G 3/20** (2006.01); **H03G 3/30** (2006.01)

CPC (source: EP)

H03F 1/0211 (2013.01); **H03F 1/0216** (2013.01); **H03F 1/0244** (2013.01); **H03F 1/0255** (2013.01); **H03F 1/0272** (2013.01); **H03F 1/0277** (2013.01); **H03G 3/004** (2013.01); **H03G 3/3042** (2013.01); **H03F 2200/504** (2013.01)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 9960698 A1 19991125; AU 3985399 A 19991206; EP 1095449 A1 20010502; EP 1095449 A4 20051109

DOCDB simple family (application)

US 9910439 W 19990507; AU 3985399 A 19990507; EP 99922981 A 19990507