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(56) Documents Cited
GB 1395337 A **JP 570080813 A**
JP 560028509 A

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(54) Abstract Title
Simple and efficient class A amplifier output stage

(57) A class AB power amplifier output stage comprising complementary transistors Q1 and Q2 is converted to class A operation by the insertion of a resistor R3 in the emitter circuit of Q1. In conjunction with the bias potential applied between the bases of Q1 and Q2 by the Vbe multiplier PR1, Q3, the resistor R3 ensures that Q1 never cuts off, even when Q2 is sinking a large current through the load Rload.. It is stated that in consequence there is no crossover distortion and that the stage is independent of load impedance variation. A large output power can be delivered even though the idling current though Q1 and Q2 is low. The output devices may be complementary MOSFETs and the output stage may form part of a feedback amplifier with an emitter-coupled input stage (figure 3). An amplifier output stage using IGBTs is claimed.

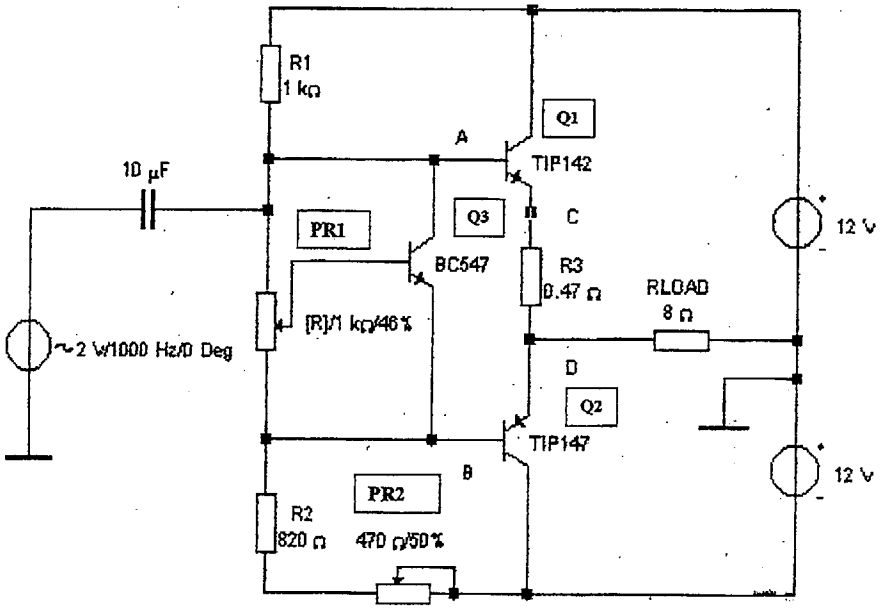

Figure 1

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