The DC collector current of the driver transistors is given by,

$$I_{C9} = I_{C10} = I_R \sqrt{h_{FE}} \qquad (3)$$

Collector terminals of the driver transistors $Tr_{9,10}$ connect to the output terminal to minimise driver dissipation and to prevent the power transistors $Tr_{10,12}$ from saturating.

Power dissipation in the bias-control loop transistors is low compared to the dissipation in the output transistors. Hence, if Tr_{6-9} share a small heat sink, thermal stability is achieved without emitter degeneration and switching distortion.

The remaining dominant source of temperature dependence is the temperature coefficient of the power transistor forward current gain. This coefficient

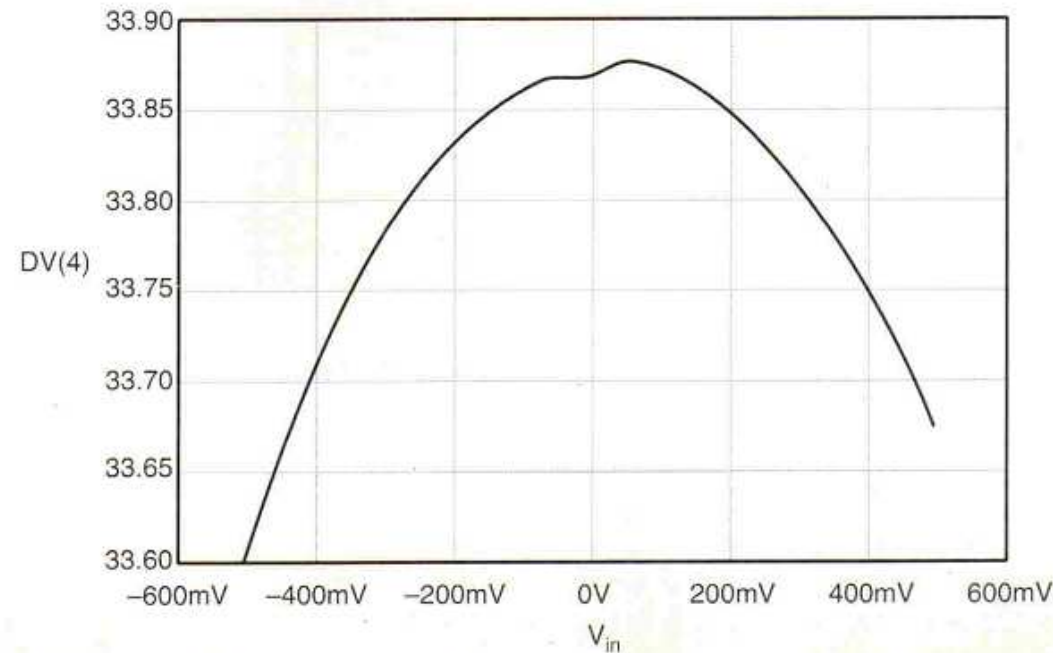Fig. 2. Complete amplifier, as used for the PSpice simulations discussed in the article.

Fig. 3. Closed-loop voltage gain simulated using PSpice.