

**POWER STAGE BIAS CIRCUIT WITH
IMPROVED EFFICIENCY AND STABILITY**

Abstract

A beam scan velocity modulation (BSVM) driver circuit comprises first and second transistors (Q1, Q2) coupled in a push-pull configuration, having respective signal input electrodes coupled for receiving a BSVM signal (Vac) having a video bandwidth, having respective and corresponding electrodes coupled to one another and to a BSVM coil (LOAD) and having respective main conductive paths. Respective bias circuits (1, 2) coupled to the main conductive paths of said transistors include nonlinear devices (CR3, CR4) having conductive states and substantially non conductive states depending upon a threshold voltage. The bias circuits (1, 2) establish respective bias thresholds nearly equal to the threshold voltage when the first and second transistors (Q1, Q2) are in quiescent states. Each nonlinear device (CR3, CR4) presents a relatively larger resistance when biased at the threshold level, and a relatively smaller resistance when the respective transistor is conducting. Power dissipation in the quiescent state is minimized without sacrificing peak signal output levels.

FIGURE 5