07.16.98 Design Idea

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reduce each stage's current. (DI #2234) To achieve a manageable level, make as many identical stages parallel as necessary to present simultaneously. If the power dissipation becomes unmanageable, you can obviously lower it. (DI #2233)

Approximately 80 and 200 kHz. These values are likely to depend on layout and may need to be adjusted. (DI #2231)

With a current-command voltage of 0V, the load current is approximately 1A. As the current will continue to rise, the load current will drop to zero. By changing the values of R and C, you can optimize the circuit's performance. (DI #2230)

The circuit measures more than 1 MHz. Because no part of the control circuit connects to the feedback op amp with approximately 600-MHz gain-bandwidth product and a greater than unity phase margin, the 0.6V p-p output from V will be less than 0.1V. (DI #2229)

Light loads, such as an ADC input, have a relatively small collector current. In this application, the output transistors, Q, are in a common-base configuration. A current-feedback op amp offers the main advantage of expanding the circuit's compliance. In normal operation, they provide voltage buffering for the input voltage (signal) at the noninverting input while acting as common-base cascodes through these transistors with a decreased a (the collector-emitter current gain in the amplifier's active region). (DI #2228)

In the noninverting configuration, the transistor is not a triode. The control circuit manages the current through the transistor. When a current-command voltage is injected into the noninverting input, the error current still effectively drops to zero. (DI #2227)

Because of the current-feedback operation, in normal operation, they provide voltage buffering for the input voltage (signal) at the noninverting input while acting as common-base cascodes through these transistors with a decreased a (the collector-emitter current gain in the amplifier's active region). (DI #2228)