

FORWARD-CURRENT BOOSTER

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The LT1012 corrects dc errors in the booster stage, and does not set high-frequency signals. Fast signals are fed directly to the stage via Q5 and the 0.01-mF coupling capacitors. DC and low frequency signals drive the stage via the op-amp's output. The output stage consists of current sources, Q1 and Q2, driving the Q3-Q5 and Q4-Q7 complementary emitter followers. Schematic of Forward-Current Booster The diode network at the output steers drive away from the transistor bases when output current exceeds 250 mA, providing fast short-circuit protection. The circuit's high frequency summing node is the junction of the 1-K and 10-K resistors at the LT1012. The 10K/39 pF pair filters high frequencies, permitting accurate dc summation at the LT1012's positive input. This current-boosted amplifier has a slew rate in excess of 1000 V/ms, a full power bandwidth of 7.5 MHz and a 3-dB point of 14 MHz.