

## SINGLE-ENDED, BUFFERED VOLTAGE OUTPUT CONFIGURATION

Figure 32 shows a buffered single-ended output configuration in which the op amp U1 performs an I-V conversion on the AD9752 output current. U1 maintains IOUTA (or IOUTB) at a virtual ground, thus minimizing the nonlinear output impedance effect on the DAC's INL performance as discussed in the ANALOG OUTPUT section. Although this single-ended configuration typically provides the best dc linearity performance, its ac distortion performance at higher DAC update rates may be limited by U1's slewing capabilities. U1 provides a negative unipolar output voltage and its full-scale output voltage is simply the product of  $R_{\rm FB}$  and  $I_{\rm OUTFS}$ . The full-scale output should be set within U1's voltage output swing capabilities by scaling  $I_{\rm OUTFS}$  and/or  $R_{\rm FB}$ . An improvement in ac distortion performance may result with a reduced  $I_{\rm OUTFS}$  since the signal current U1 will be required to sink will be subsequently reduced.