For an op-amp in differential to single ended conversion, the input impedance on the inverting input is calculated as below.

Zin- = RG / (1 + α)

Where,

α = RF / (RF + RG)

For RG = 200ohms and RF = 402 ohms, this Zin- comes out to be 119.92.

The resistor required to make the combined impedance from the output of Iout- then comes out to be:

Zshunt- = (Zin-)x25 / [(Zin-) – 25] = 31.58 ohms

This number of 31.58 ohms is slightly higher than what is shown in the DAC904 datasheet, and should be corrected to the right value as shown below.

The output impedance on the non-inverting input of the op-amp should stay the same as (26.1 || (200 + 402)) = 25-ohms.



