

## 仪表放大器桥接电路误差预算分析

在典型应用中，有必要了解仪表放大器的误差源。下图1所示为一个350 Ω的称重传感器，当用10 V源激励时，其满量程输出为100 mV。用外部499 Ω增益设置电阻，将AD620的增益设为100。表中列出了每种误差源对2145 ppm的总非调整误差的贡献。但需要注意的是，增益、失调和CMR误差都可以通过系统校准消除。其余误差——增益非线性度和0.1 Hz至10 Hz噪声——无法通过校准消除，最终使系统分辨率限制为42.8 ppm(大约相当于14位精度)。当然，本例只是用于说明，但对于解决增益非线性度、LF噪声等性能限制性误差问题具有重要意义。

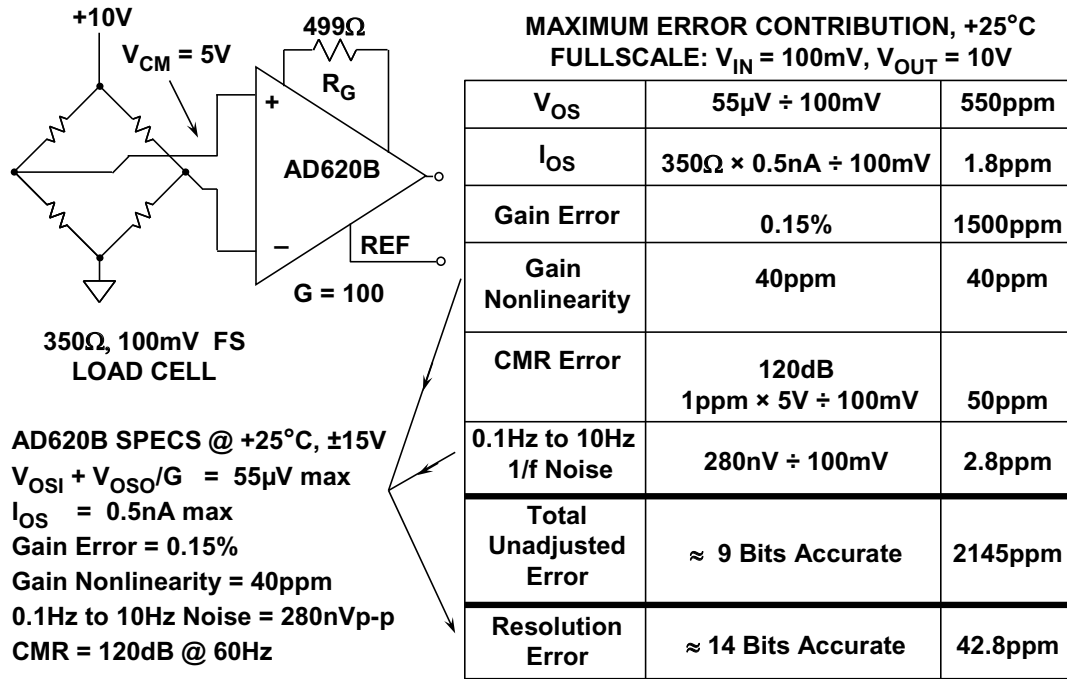


图1: AD620B 桥接放大器直流误差预算

ADI网站上提供了一种通用型放大器(包括仪表放大器)[误差预算分析](#)工具和 [Analog Bridge Wizard™](#) 以协助桥接电路的设计。

## 参考文献

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