

Inrush Current for PMFc3000/2000/4000

This application note applies to the PMFc3000, PMF2000 and PMF4000 series of mass air flow sensors. The sensor requires somewhere in the neighborhood of 150 uCoulombs of energy to charge its internal capacitors on startup.

With a 10 Vdc source supply the charging current looks like Figure 1 (with current measured across a 1 Ohm resistor)

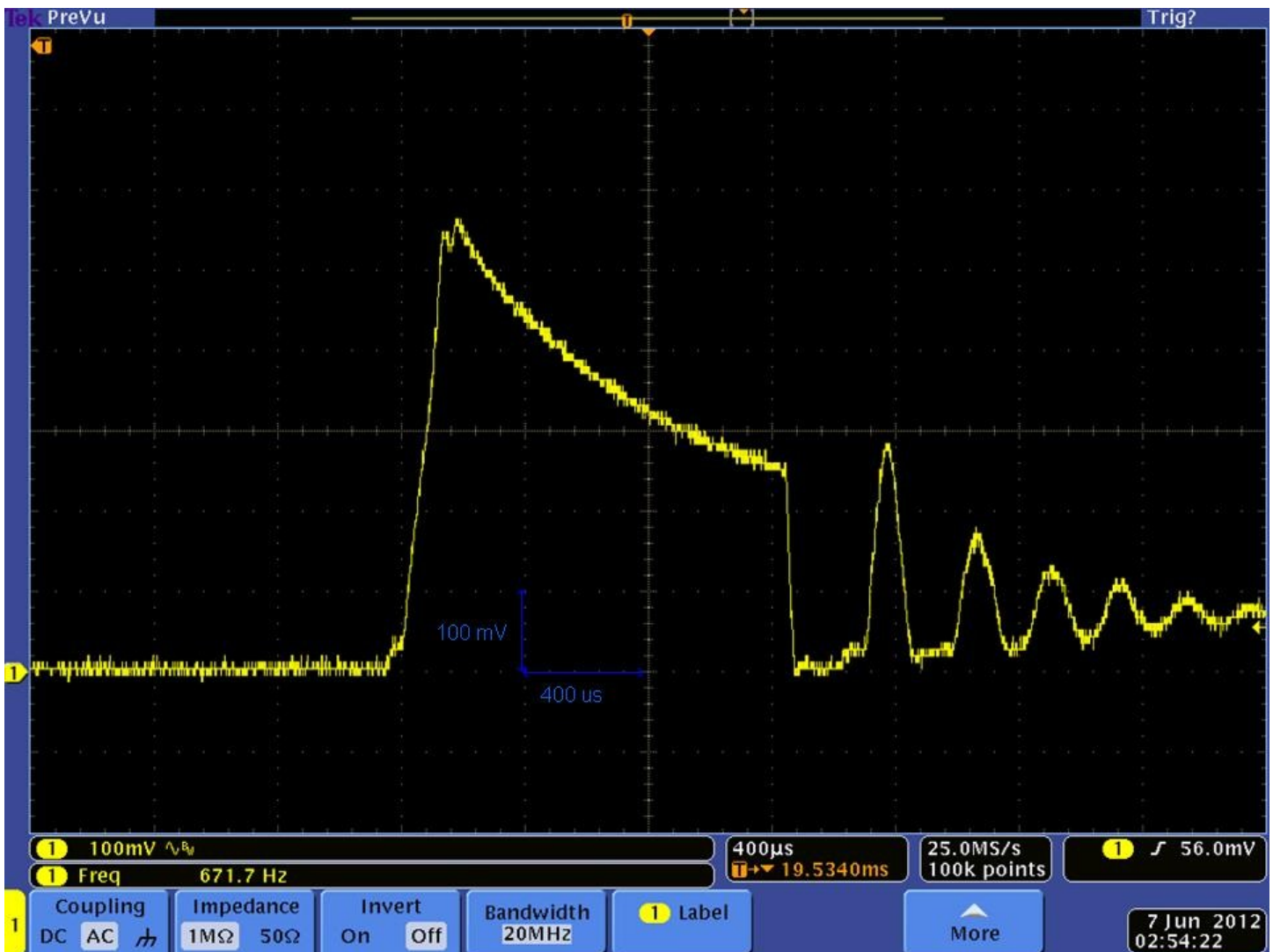


Figure 1 Inrush current (series resistance 1 ohm)

If this current is considered too high, a series resistance of 5 ohms will reduce the inrush current as shown in Figure 2.

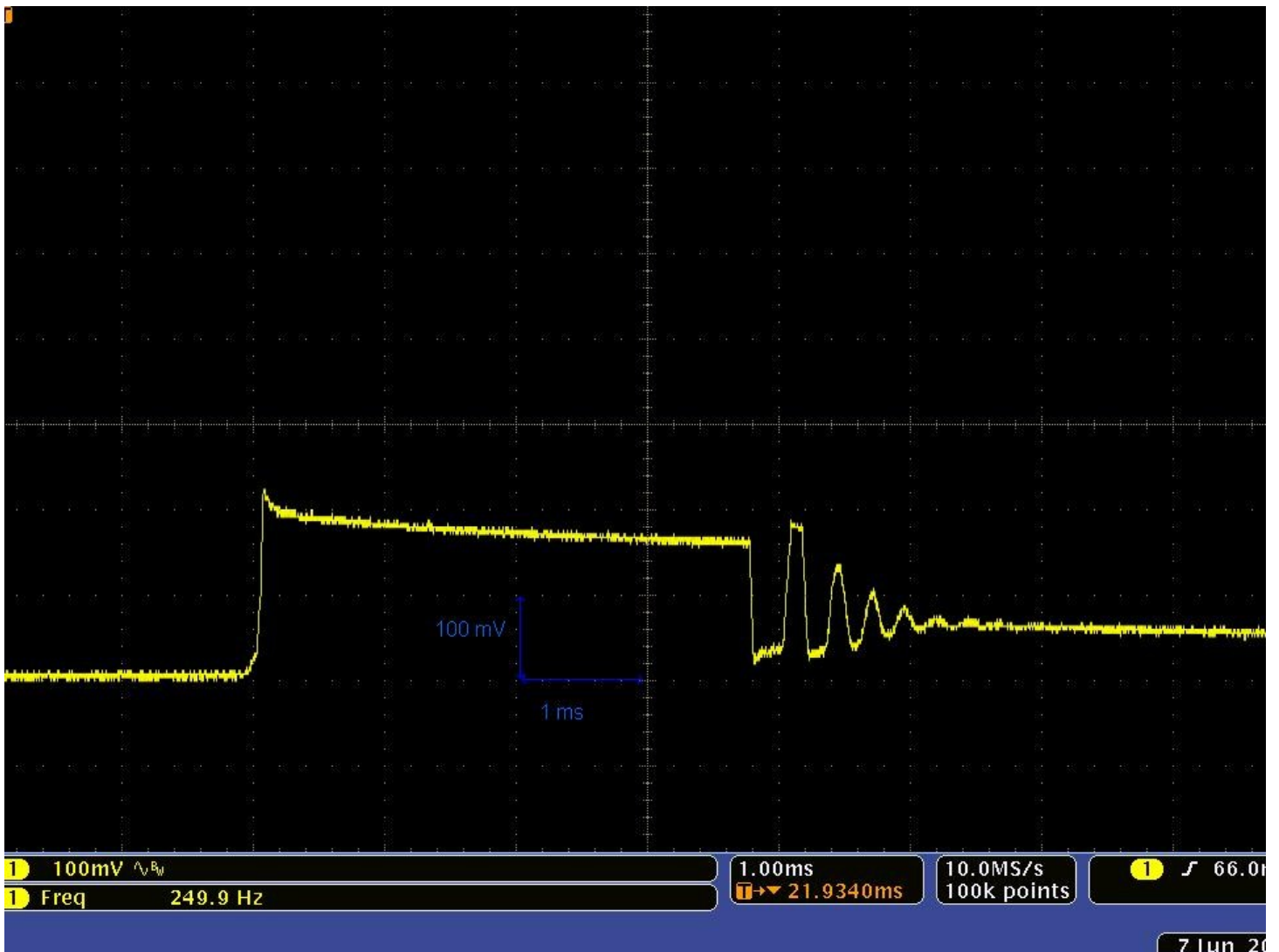


Figure 2 Inrush Current (series resistance 5 ohm)