

External Termination

When viewing pulse rise times below 100 nanoseconds, RF currents above a few megahertz, or when using long cables, it is advisable to terminate the current monitor output cable at the oscilloscope with 50 ohms to prevent standing waves or cable fill-time effects. With this termination the output voltage will be approximately half the unterminated value, subject to the accuracy of the termination resistance, and the attenuation of the cable.

Fast-rising pulses can produce spurious observed ringing due to high frequency current flowing on the outside of the cable shield. This current can be suppressed by increasing the inductance of the shield run by threading the cable through one or more magnetic cores. Good results have been obtained using three turns through four ferrite cores of about one inch inside diameter, two inch outside diameter and 1/2 inch thickness.

With external termination, models 2877, 4100, 2100, 3100, 150, 410, 411, 110, 110A, and 1010 will exhibit lower droop and increased current time product.