

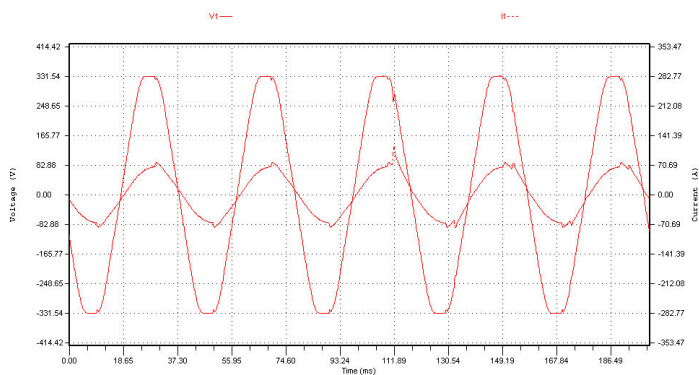
Spike Detect

The PowerPro samples at 256 times per cycle (every cycle). In addition to capturing RMS voltage transients it can also capture sub-cycle voltage transients down to 65 microseconds. When an RMS voltage transient or a high speed sub-cycle voltage transient is triggered five cycles of voltage and current waveforms are captured.

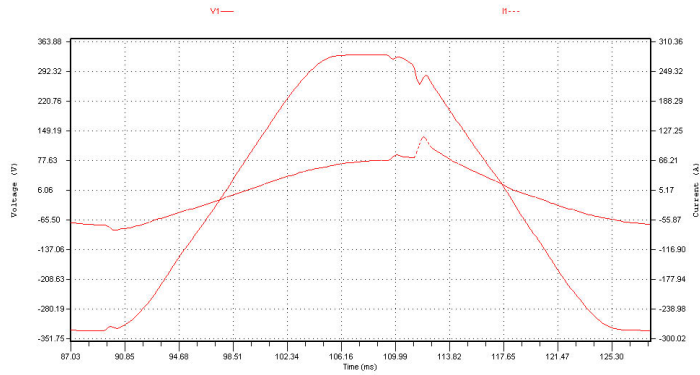
Being able to see the current response during a voltage transient is crucial to being able to diagnose the problem. Figures 1 and 2 show a voltage transient that is caused by the load being monitored. Figures 3 and 4 show a voltage transient that is caused by an external disturbance. The determination of whether the cause of the voltage transient is from the monitored load or external to the monitored load is done by examining the current waveform during the transient. If the transient current is increasing while the transient voltage is decreasing the voltage transient is being caused by the load. If the waveform of the transient current is similar in shape to the transient voltage then the cause of the voltage transient is external to the monitored load.

PPF00043.PPF - Voltage WaveForms and Current WaveForms Graph
Event #17, V1 Spike detected at 2005/04/02 15:57:47

PPF00043.PPF - Voltage WaveForms and Current WaveForms Graph (Zoomed)
Event #17, V1 Spike detected at 2005/04/02 15:57:47



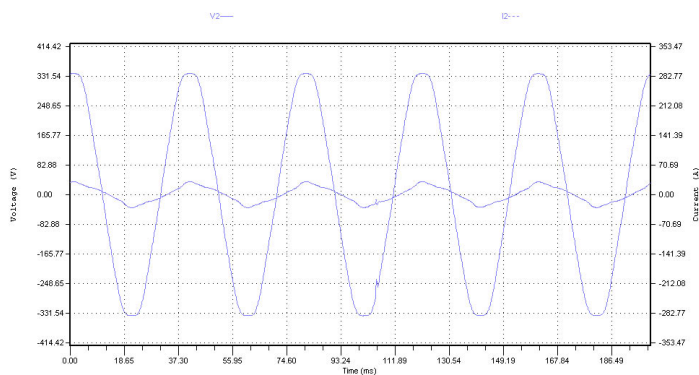
▲ Fig. 1 - Voltage transient caused by load



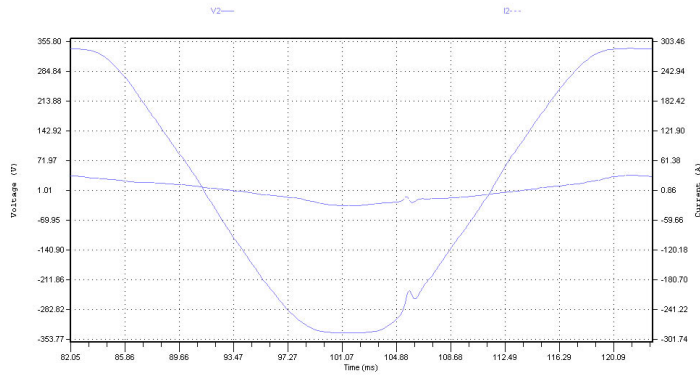
▲ Fig. 2 - Zoomed Voltage transient caused by load

PPF00043.PPF - Voltage WaveForms and Current WaveForms Graph
Event #148, V2 Spike detected at 2005/04/08 17:30:36

PPF00043.PPF - Voltage WaveForms and Current WaveForms Graph (Zoomed)
Event #148, V2 Spike detected at 2005/04/08 17:30:36



▲ Fig. 3 - Voltage transient, cause is external to load



▲ Fig. 4 - Zoomed Voltage transient, cause is external to load