



The circuit on the left is a basic model of a flyback converter in switch mode power supply, typically found in wall warts and smaller electrical appliances up to about 50 W. The operating frequency is normally between 50 and 100 kHz to keep magnetic components and filter capacitors as small as practicable, and not too high to cause efficiency losses. The rise/fall time in this model is about 100ns – typical in a non-snubered case.

The fast rise/fall times at Vd are coupled to surrounding electronics capacitively. Note that even *with C2 set to 1-2pF*, the peak red trace signal is still 100-200 mV – so the noise coupling is extremely robust.