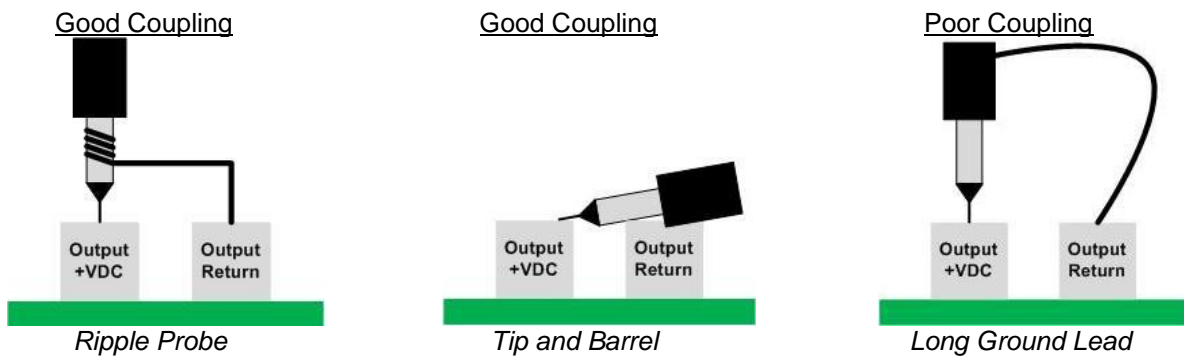


PURPOSE AND APPLICATION

The purpose of this application note is to provide insight and guidance to manufacturers when measuring output ripple noise on Integrated Power Designs (IPD) power supplies.

GUIDANCE

1. Printed wiring board mounting holes, (4) four total, need to be reliably connected to a common ground.
2. Oscilloscope ground should be isolated from earth ground.
3. Oscilloscope should be set to limit the bandwidth to 20MHz which removes the high frequency component of the signal leaving the output ripple itself.
4. Output ripple noise measurements should be made at the power supply output pins using either a ripple probe or the tip and barrel method. Using long leads on the probe creates additional inductance that induces higher switching transients during the switching transition.



5. Careful installation and earthing of the power supply within the system will help to minimize the effect of noise and it can be further reduced by the addition of decoupling capacitors on the power supply output terminals. It is important to keep the component legs as short as possible if any benefit is to be achieved and the capacitor must be a low ESR, high frequency type, eg, ceramic. This helps reduce any radiated noise in the power supply connection leads.