

RC Snubber — Quick Sizing

- Measure ringing frequency f_r and estimate node capacitance C_{node} (datasheet + scope)
- Estimate $L \approx 1 / (2\pi f_r)^2 \times C_{node}$. Start $C_{snub} \approx 0.5\text{--}1.0 \times C_{node}$.
- Pick $R \approx \sqrt{L / C_{snub}}$. Start slightly overdamped; trim for minimal overshoot + acceptable loss.
- Place physically close to the node, shortest return to ground; avoid long skinny traces.

RC Snubber — Verification on Scope

- Observe overshoot, ringing frequency, and settling; compare to baseline capture.
- Sweep R in small steps; fine-trim C to avoid re-introducing peaking at another frequency
- Check temperature rise on resistor at worst-case duty/load; estimate dissipation with ripple current.

- Confirm no new CM path via snubber return; keep loop compact.

RC Snubber — Pitfalls & Tips

- Over-damping wastes power; under-damping leaves overshoot. Validate across line/load corners.

- Do not move ringing into radio bands; re-check conducted and radiated spectra.

- For synchronous rectifiers, consider RC across diode/MOSFET only if body-diode stress persists.

- Prefer resistor packages with adequate voltage rating and pulse handling.