

VRM Multiphase Design Checklist

ICNavigator — Engineering Worksheet

Project Info

- Board/VR ID
- Target Vout & Tolerance
- Max/Min Iload
- VID/SVID/AVS requirements

Phases & Frequency

- Phase count
- Fsw / interleaving
- Ext clock/sync?

Inductor/Capacitor

- Inductor value & DCR
- Cout type/ESR/quantity
- Ripple targets

Current Sensing

- DCR vs Rsense
- IMON scale
- Temp compensation

Compensation

- Type II/III
- Crossover BW
- Phase margin

Load-Line & AVP

- Droop slope ($m\Omega$)
- Transient window ($\pm mV$)
- IMON calibration plan

Protections

- OCP total/per-phase
- OVP/UVP/OTP thresholds
- Fault policy (retry/latch)

Light-Load Strategy

- Phase shedding thresholds
- PSM/Mode change criteria

Layout & Thermal

- Sense routing/Kelvin
- Hot spot map
- EMI measures

Validation

- Bode/PRBS
- Load-step tests
- Batch consistency

Release

- Production parameter lock
- NVM/OTP image
- Version/signature/date