Generic Schematic Checklist

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- **Visual Design**
  - Power supplies use supply symbols, not wires
  - Positive supplies point up, and negative supplies/ground point down
  - Groups of nets above ≥ 4 nets collected into buses
  - All nets descriptively named
  - Net “stubs” have an “off-sheet” (“XREF” in EAGLE) label
  - Blocks in your schematic clearly labeled
  - There's a frame around the schematic
  - It's clear *where* your power is coming from
  - Data flow (inputs, outputs) are clear and labeled
- **Part values**
  - Special case capacitors marked with power and tolerance
  - Capacitors have the appropriate voltage
  - Power dissipation checked in all of your resistors
  - Special case resistors marked with power and tolerance
  - Print your BOM. Check that each part is in stock at a distributor.
- **Electrical Rule checks**
  - All of your components have values (including “NP”)
  - All inputs have the correct voltage levels
  - All outputs have the correct load impedance
  - All MOSFETs placed *forwards* wrt the body diode
  - **No (non-approved) errors OR warnings in the ERC**
  - Your schematic is peer reviewed by at least two different people.
  - Double check your approved errors, looking for anomalies and possible errors.
- **Best Practices**
  - Small, low ESR (e.g., ceramic) bypass capacitors on ALL IC supplies
  - Large bypass (e.g., electrolytic) capacitors on your board at the power connector and regulator IC.
  - **Design for Test**: place test points on critical signals
  - **Design for Fail**: group components in separable modular blocks
  - Place programming connectors and DOUBLE CHECK their pinouts
  - Add debugging hardware (e.g., test switches, LEDs, scope probe points, etc)