PCB Design for Manufacturability (DFM) Checklist

Pre-Fabrication Release Review

Project / Board: _____ **PCB Revision:** _____ **Review Date:** _____ **Reviewer:** _____ **Fabricator / Process Target:** _____

AREA	CHECK	STATUS	NOTES
Trace Width / Spacing	Confirm geometry is compatible with copper weight, layer type, fabrication process and selected manufacturer capability.	☐ Pass ☐ Review ☐ N/A	
Copper-to-Edge Clearance	Review copper near routed edges, cutouts, slots and scored edges; identify intentional edge-plated features.	☐ Pass ☐ Review ☐ N/A	
Annular Ring	Confirm pad / hole geometry is suitable for the intended drilling, plating and registration process.	☐ Pass ☐ Review ☐ N/A	
Drill / Finished-Hole Requirements	Clearly define intended finished-hole requirements and avoid treating finished hole and drill-tool size as automatically identical.	☐ Pass ☐ Review ☐ N/A	
PTH / NPTH Identification	Ensure plated and non-plated hole intent is unambiguous in the released manufacturing data.	☐ Pass ☐ Review ☐ N/A	
Via Structure / Layer Pairs	Confirm through, blind, buried and microvia structures, including start / stop layers where applicable.	☐ Pass ☐ Review ☐ N/A	
Solder Mask	Review openings, webs, exposed copper and fine-pitch mask features against project and fabricator capability.	☐ Pass ☐ Review ☐ N/A	
Silkscreen / Legend	Verify reference designators, polarity / pin-1 markings and legend placement do not conflict with solderable features.	☐ Pass ☐ Review ☐ N/A	
Board Outline / Slots / Cutouts	Confirm a clear finished board profile and unambiguous routed, slotted or internal-cutout features.	☐ Pass ☐ Review ☐ N/A	
Copper Distribution	Review large or asymmetric copper regions, plane features and local copper density where process sensitivity may matter.	☐ Pass ☐ Review ☐ N/A	
Stackup / Material	Confirm layer order, finished thickness, copper requirements and project-specific material needs.	☐ Pass ☐ Review ☐ N/A	
Controlled Impedance	Identify controlled nets, target impedance, relevant layers and project-defined / fabricator-agreed tolerance where required.	☐ Pass ☐ Review ☐ N/A	
Surface Finish	Confirm the required finish is clearly stated and compatible with project assembly / application needs.	☐ Pass ☐ Review ☐ N/A	
Fabrication Notes	Verify fabrication notes match the released PCB, drill, stackup and other manufacturing data.	☐ Pass ☐ Review ☐ N/A	
Special Processes	Document edge plating, castellations, controlled-depth routing, press-fit, heavy copper, via fill/cap or other special processes where applicable.	☐ Pass ☐ Review ☐ N/A	
Manufacturer Capability Alignment	Confirm critical geometry and special processes are within the selected fabricator's qualified capability for this project.	☐ Pass ☐ Review ☐ N/A	
Revision Consistency	Confirm PCB, fabrication notes, drill data, stackup and other released manufacturing files belong to the same approved revision context.	☐ Pass ☐ Review ☐ N/A	

IMPORTANT Important: This checklist does not define universal PCB manufacturing dimensions or tolerances. Final design rules should be confirmed against the specific board construction, materials, process requirements and selected fabricator capability.