

Design for Manufacturability Guidelines

This document provides an overview of the Alorium Technology production and assembly Design for Manufacturability (DFM) guidelines.

General Guidelines

Board/Panel

- Minimum 1.0 inch in at least one direction
- Maximum 200 mm x 300mm
- Minimum 100 mil holes at each of 4 corners
- Board or panel must include fiducials

Parts Handling

- Minimum 0402 component size
- Minimum 0.5 mm pad pitch for QFPs/QFNs/BGAs
- Maximum 28x28 mm part size
- 9 mm max component height

Board Edge Minimums

- Frameless boards: 40 mils (1.0 mm)
- Framed panels: No restriction
 - Note: requires a frame between the component and the edge of the panel

Stencil Requirements

- Framed stainless steel stencil
- Maximum 18 in x 18 in
- Minimum 9 in x 9 in
- Minimum 10 mil x 10 mil square openings

Manufacturing Capabilities - At A Glance

- ✓ **Precision Manual Solder Stenciler Station**
- ✓ **Visual Inspection**
- ✓ **Mancorp MC-300 Automated Pick and Place**
 - Vision-inspected pick and place
 - PCB offset/misalignment correction
 - Up to 1800 CPH
- ✓ **Manual Rework Station**
 - Component replacement
 - Schematic error fixes
 - Debug/bring-up cuts & jumps
- ✓ **Mancorp MC-301 Reflow Oven**
 - Programmable reflow profiles
 - 9.84" x 7.87" (250 mm x 200 mm) soldering area capacity
- ✓ **Test Fixture Design**
 - Mechanical and electrical design
 - Software interface
 - Post-production testing