

Axiom Electronics PCBA Design for Manufacturability Guidelines

Section: 11.2

Revision: B

Revision Date: 10/15/2023

DFM Subject: Land Pattern Design, Resistors and Capacitors

DFM Requirement:

IPC-7351 and IPC-7352 Requirements for Surface Mount Design and Land Pattern Standard should be used as a guide for land pattern design. This section also contains some basic guidance for land pattern design, which is based on industry and Axiom best practice.

DFM Impact:

Land pattern design is critical to solder joint workmanship (IPC-610) and solder joint reliability. If a land is too small there may not be enough solder to form a reliable solder joint. If the land is too big it will tend to act as a solder thief; during reflow soldering it will pull solder away from the lead and form a solder joint with insufficient solder.

DFM Details: Resistor and capacitor land pattern design guidance

Resistors and capacitors use rectangular end terminations

- Maximum land width should not exceed maximum component width
- Minimum land width should not be less than 80% of maximum component width
- Keep in mind that component width and solderable width are not always the same
- Use IPC-7351 and IPC-7352 as a reference for remaining land pattern dimensions

