

Introduction: This document describes about the process requirement procedure needed before assembly of the product.

Objective: To maintain good quality of the product as per customer satisfaction with minimum efforts.

Process Available:

- Leaded
- Lead free

Sample PCB's required for new product:

- Assembled PCB – 1# (for assembly reference)
- Bare PCB – 1# (for programming and reflow profile activities)

Machine Requirements:

➤ **Screen printer:**

- PCB X, Y and thickness data.
- Machine standard Stencil size – 29X29 inch with half etched fiducial at four corner.
- Minimum conveyor width - 50/50 mm.
- Maximum conveyor width – 610/610 mm.
- PCB fiducial – 4 corners.
- PCB/panel edge clearance – 3mm.(if not available then 5mm extra rip need to be given)
- PCB thickness – 0.4mm to 6mm.
- Leaded and lead free process available.

➤ **Pick and Place:**

- X, Y co-ordinate of Product components (Separate data for Top and Bottom)
- PCB fiducial – 4 corners.
- PCB/panel edge clearance – 3mm.(if not available then 5mm extra rip need to be given)

- PCB thickness - 0.4mm to 6mm.
- Bill of material (Separate data for Top and Bottom)
- Assembly drawing.
- Minimum conveyor width - 50/50 mm.
- Maximum conveyor width - 508/400 mm.
- Maximum component height – 24.5mm.
- Maximum Square component size-102/102mm.
- Maximum Rectangle component size-32/100mm.
- **Mandatory** Minimum reel length for automation-30cm.

Facilities for pick and place:

- ✓ Paper reel component
- ✓ Emboss reel component
- ✓ Stick component
- ✓ Tray component

❖ NOTE:

- Machine can handle 0.4/0.2mm component with 8mm paper reel width.
- Component reel holes should be on the left side.
- Reels given should not be attached by any kind of tapes.
- Loose components without part number is not acceptable.

Example: Machine Input PCB XY coordinates

Sl.No	Component Description	Package	X(mm)	Y(mm)	Angle(deg)
1.	CAP CER 100PF 50V COG/NP0 0201	C0201	1.00	1.00	90

➤ Reflow oven :

- Recommend for round edge PCB in order to avoid any kind of PCB damages.
- Leaded & lead-free process.
- Minimum board size-50mm
- Maximum board size-400mm
- Chain conveyor.
- Mesh conveyor.
- PCB height Top side clearance -30mm.
- PCB height Bottom side clearance-25mm.