

Wipe Frequency DOE using SMTA Board

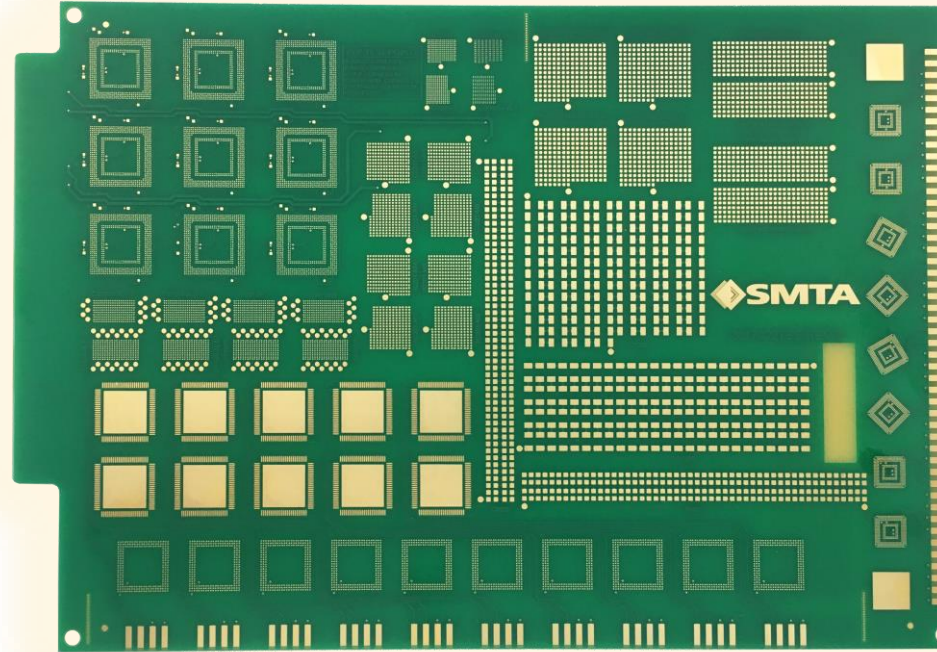
Component Types on PCB

- 01005, 0201, 0402, 0603, 1206
 - 0.5mm, 0.4mm BGA
 - 0.4mm MLF
- All spaced at maximum population density

Wipe Frequency Variables

For 20 prints, wipe after print #s:

- 2, 6 12 and 20
 - Increases frequency by 2, 4, 6, and 8 prints per wipe
 - Can go to 10 if desired (30 print test)
- Use one uncoated stencil and one coated with NanoClear



SPI Data: Koh Young

- Volume – Average
 - Repeatability – Coefficient of Variation
 - Export for analysis
- *Using SMTA Board at 15µm measurement threshold

Output

- Charts showing Volumes, Cpk's and CVs:
 - Sorted by package type
 - Comparing “before” and “after” of each wipe
- Defines the minimum number or prints per wipe
 - For each package type
 - Immediate impact of wipe on process output

Results

- ✓ Guidelines on minimum wipe frequency based on BOM
- ✓ Comparison of wet and dry wipe effectiveness with and without nanocoating
- ✓ Quantifiable improvements in process control gained by wet wiping and/or nanocoating
 - ✓ Translation to cost savings and additional machine uptime