



SHENMAO

Solder Preform

**Reliability Improvement
on Solder Joints**

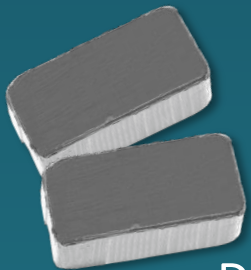


SHENMAO Technology Inc.

Your Ultimate Choice for Solder

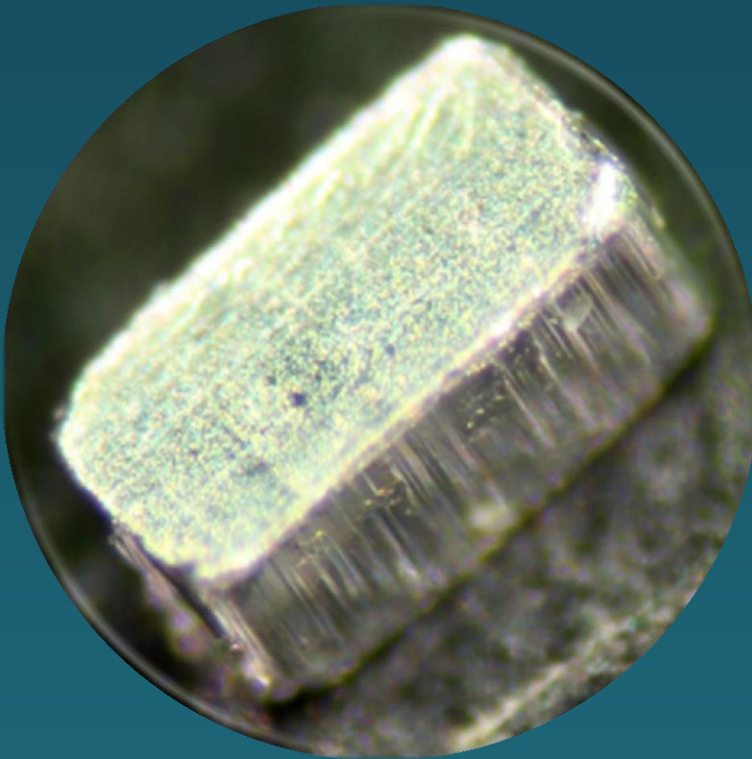
Specification

Model	Size (mm)			Volume (mm ³)	Packaging Quantity (7"Reel)
	Length	Width	Thickness		
0201	0.51	0.25	0.25	0.03	10000 pcs
0402	1.00	0.50	0.50	0.25	5000 pcs
0603	1.60	0.80	0.80	1.02	4000 pcs
0805	2.01	1.30	0.76	1.98	3000 pcs



Dimensional Tolerances: Length and width: $\pm 0.05\text{mm}$, thickness: $\pm 10\%$
Applicable Alloy: SAC305, SAC105, SC07, and other soft soldering alloy
Please inquire for your own alloy, form and size specification.

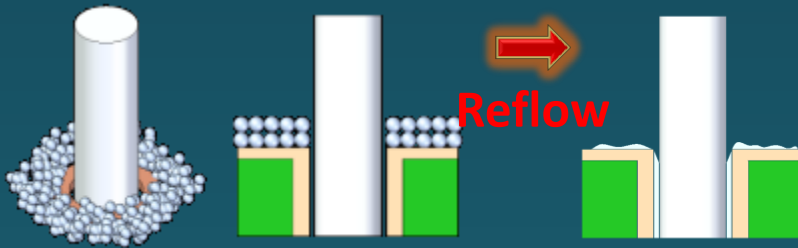
Features



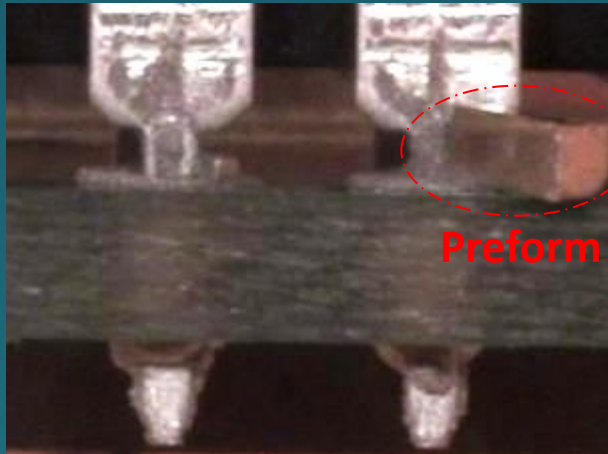
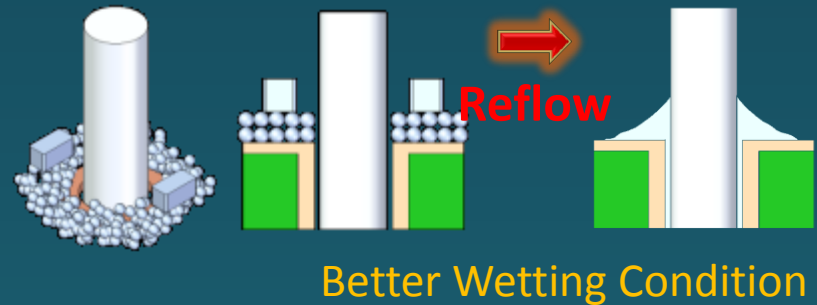
- ❑ Reduce Wave Soldering
- ❑ Increase Solder Volume
- ❑ Reliability Improvement
- ❑ Process Yield Improvement
 - Self-Alignment
 - Reduce Pick&Place Error Rates

Reduce Wave Soldering

Conventional Process



Solder Preform Process

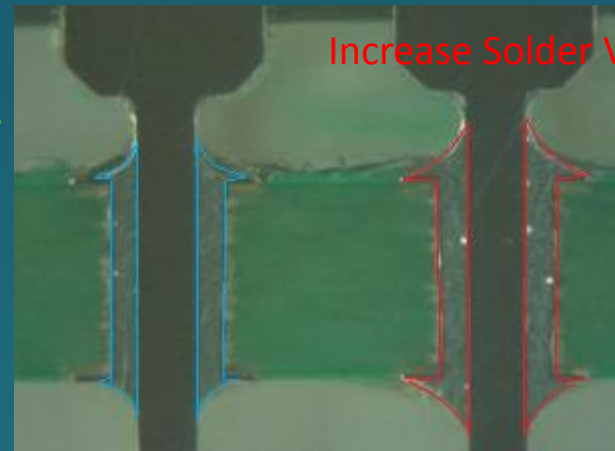


Conventional

Solder Preform



Reflow

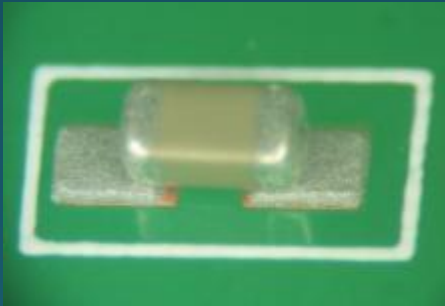


Conventional

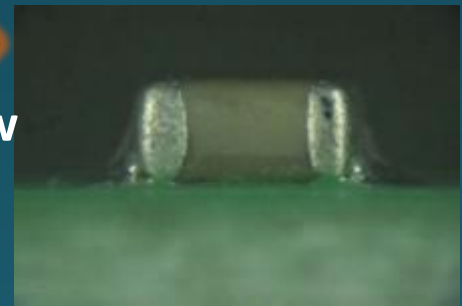
Solder Preform

Increase Solder Volume

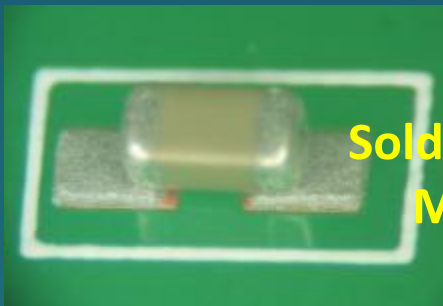
Conventional Process



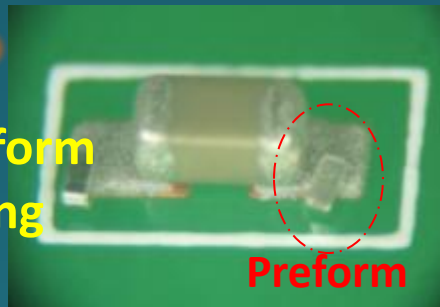
Reflow



Solder Preform Process



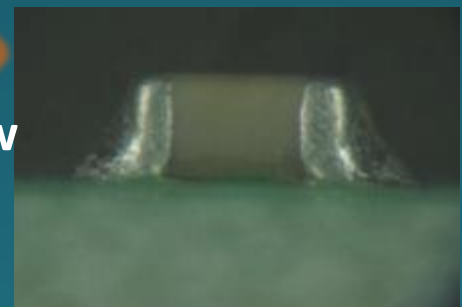
Solder Preform
Mounting



Preform



Reflow



Increase Solder Volume

Increase Solder Volume

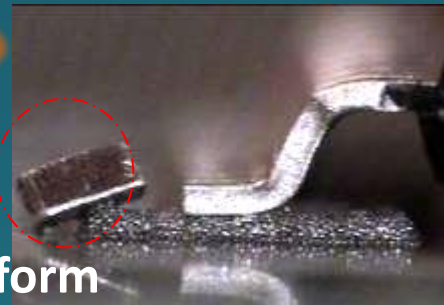
Conventional Process



Reflow



Solder Preform Process



Solder Preform
Mounting



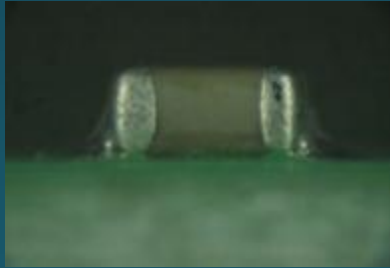
reflow



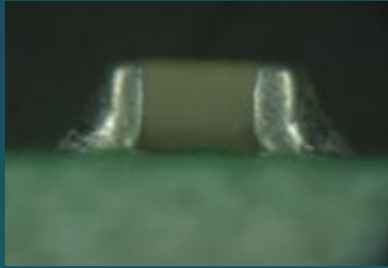
Increase Solder Volume

Reliability Improvement

Conventional Process



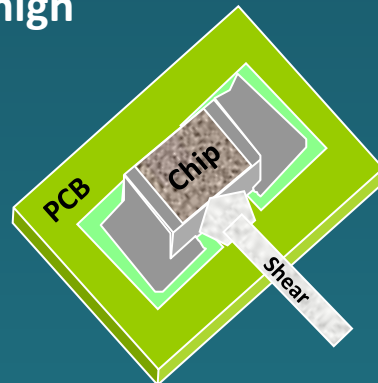
Solder Preform Process



Test Condition

Shear speed: 100um/sec

Shear high: 1/4 chip high



Test results



Reliability Improvement

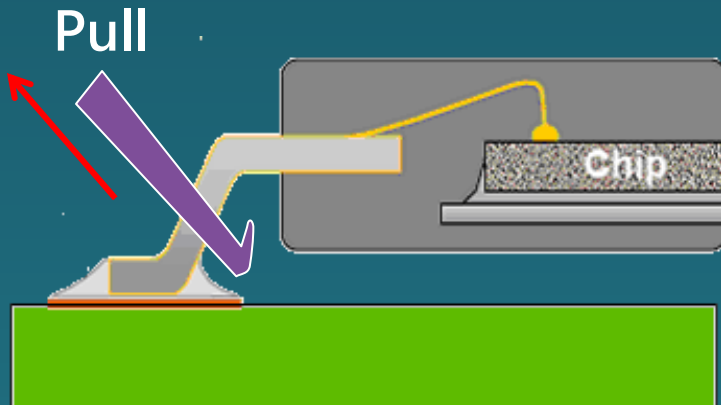
Conventional Process



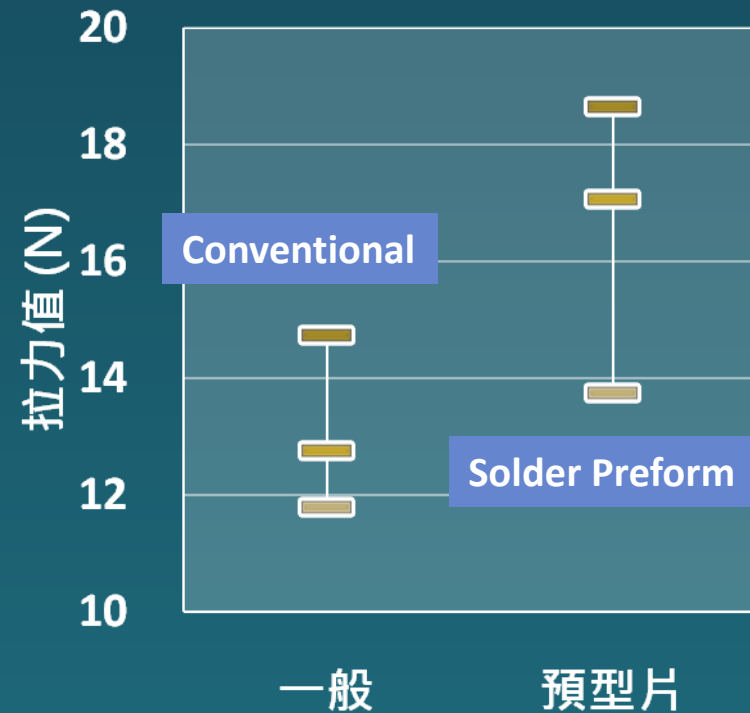
Solder Preform Process



Test Condition

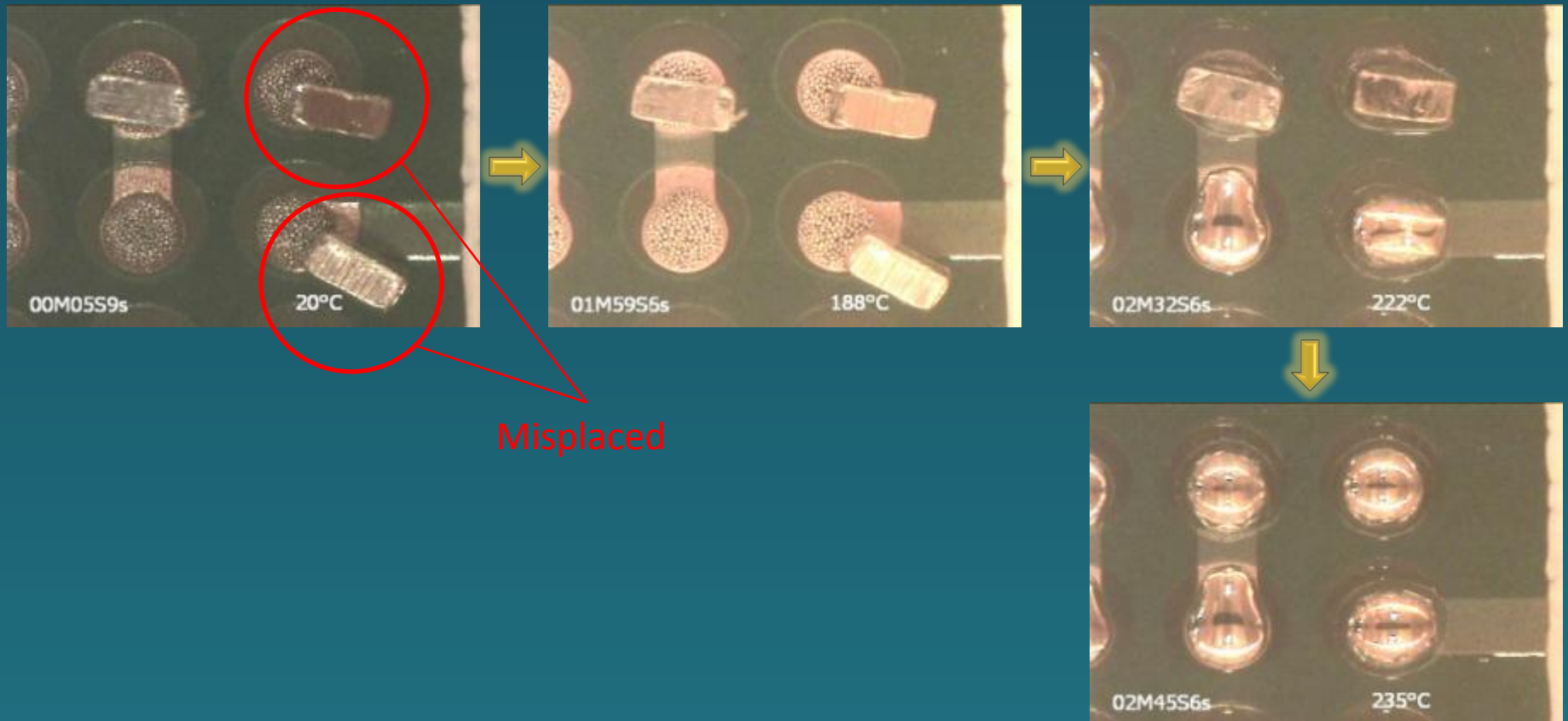


Test results



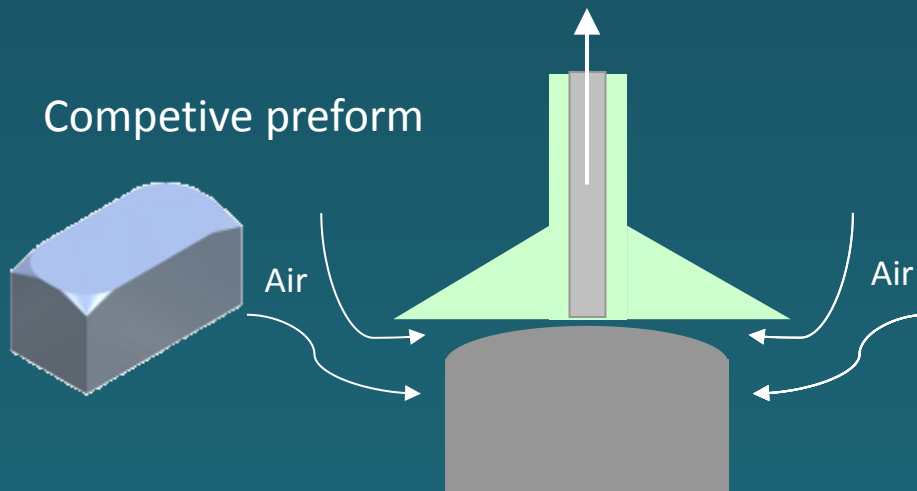
Process Yield Improvement

Self-Alignment of Misplaced Solder Preform



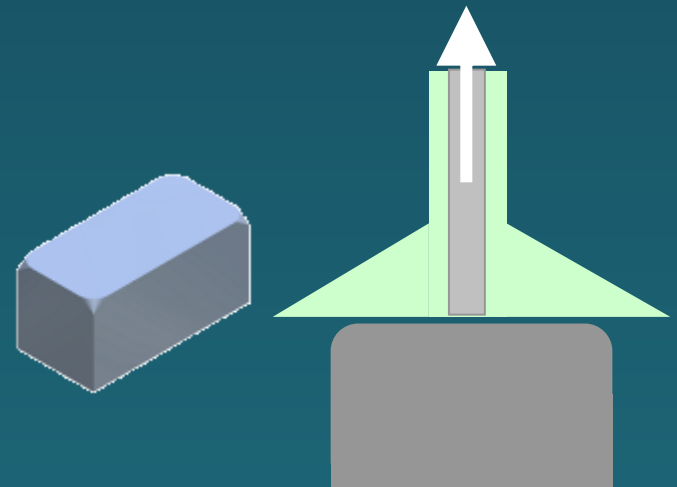
Process Yield Improvement

Reduce pick error rates



Nozzle performance
reduced due to no
planar surface

SHENMAO Solder Preform



- Planar surface
- Excellent nozzle suction
- High placement accuracy



THANKS!

SHENMAO Technology Inc.
Your Ultimate Choice for Solder