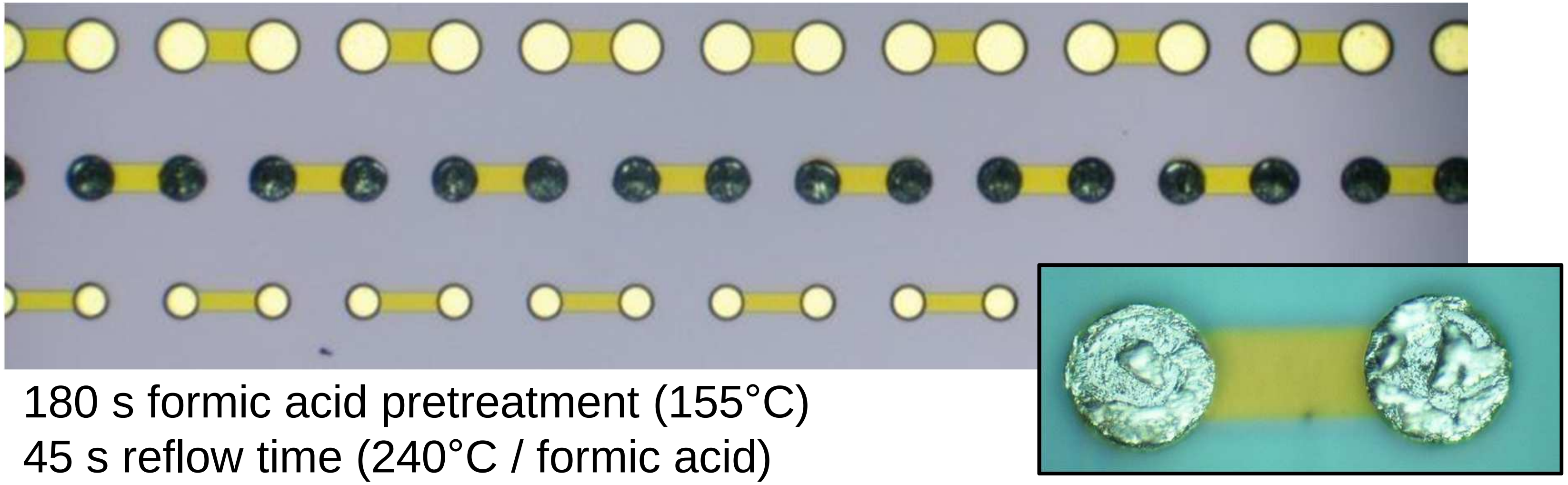
Very good bond result with Finetech‘s Femto achieved

TEST RESULTS AND MICROGRAPH OF TYPICAL DUCTILE SOLDER BUMP FRACTURE



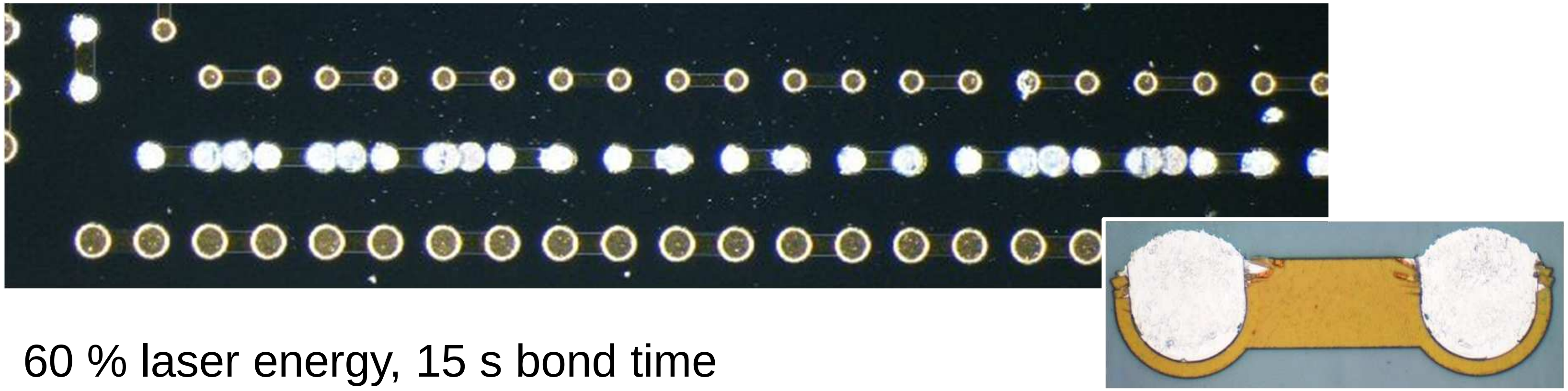
180 s formic acid pretreatment (155°C)
45 s reflow time (240°C / formic acid)
All steps on heated chuck / bond head raised after placement

- Ductile solder fracture (> 85 %)
- Bump release from pads (residual)
- Very good leveling
- Shear force: 47.93 N (0.13 N/bump)
- Reproducible (two bonds with identical results)

Finetech Test#2 Bonds #8 and #9
20.09.2011

Very good bond result with Pac Tech‘s LaPlace achieved

TEST RESULTS AND MICROGRAPH OF TYPICAL BUMP RELEASE



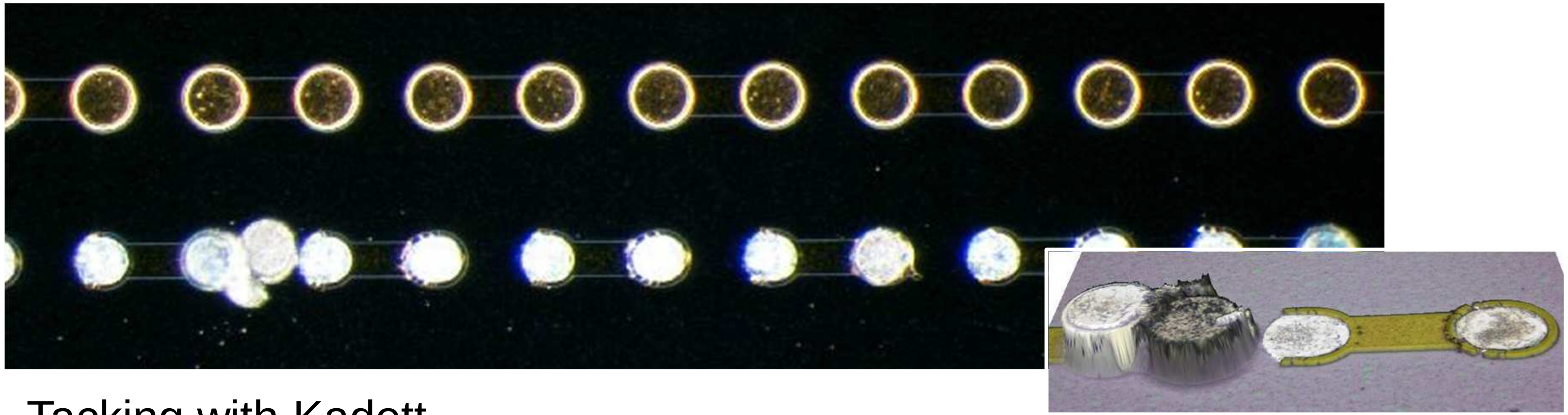
60 % laser energy, 15 s bond time
100 s formic acid pretreatment
80 °C chuck temperature

- Bump release from pads
- Very good leveling
- Shear force: 76.7 N (0.21 N/bump)
- Reproducible (two bonds with identical results)

Pac Tech Test #4 Bond #3
16.08.2011

Very good bond result with SET‘s Kadett and Unitemp‘s reflow oven achieved

TEST RESULTS AND PROCESS PARAMETER



Tacking with Kadett

2 N force for 10 s at 155℃ (head and chuck temperature)

Reflow with Unitemp RSS-450-110 oven

Reflow at 240℃ (formic acid atmosphere)

- Bump release from pads
- Shear force: 65.1 N (0.18 N/bump)
- Reproducible (two bonds with identical results)

SET Test from March 2011

First FC Bonder tests successfully accomplished

Preliminary tests with Pac 2.7. test chip layout

- All vendors succeeded
- All techniques work

Next test round

- Realistic dummy sensor and ROC samples
- Waiting for the structures