

ADAT3 XF DBRE

Die Bond Reel Eutectic bonder

Application

Flexible platform for all applications

- Fits in XF (=eXtended Flexibility) platform architecture reel-to-reel lines
- Convertible to other XF applications for Leaded and Leadless to cater for product mix flexibility

Key Feature

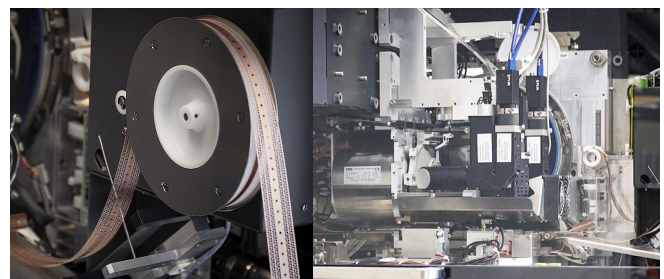
- Product size 200x200µm to 5x5 mm
- Lead frame size up to 32 mm wide
- 48000 UPH with roadmap to 60000 UPH for high-density, small dies
- Lead frame anti-tarnish outgassing module optional
- Connectivity via SECS/GEM for automated set-up and die traceability
- Automatic FFC wafer change for hands-off operation (AEC-Q101 compliant)
- Optical resolution (2.3µm/pix), optionally with sidewall inspection
- Ultra low (programmable) pickup force (20gram)
- Extensive wafer mapping and wafer alignment functionality
- Machine WxDxH: 2050x1250x2200 mm³



System accuracy

Small die (≤0.4 x 0.4mm)

XY	$1 \sigma_{xy} \leq 10 \mu\text{m}$
Rotation	$1 \sigma_{\phi} < 1^\circ$
Die shear	$> 500 \text{ g/mm}^2$



Close up of DBRE

Inspection Categories

Pre-pick inspections	Front side chipping depending scribe lane, Die size measurement, Ink dot inspection, Surface inspection, Die alignment, Wafer map alignment
Post pick inspection	Die present, Die alignment, Backside chipping, Die size measurement, Side wall inspection optional for flat collets
Pre-attach inspection	Lead frame inspection as a roadmap element
Post attach inspection	Die present, Lead frame alignment x/y, Black die detection. Surface inspection as a roadmap element

Wafer handling	Spec
Wafer handling	Auto wafer change, Wafer expansion, Auto barcode reader
Wafer diameter [inch]	8 [inch] 6 [inch] on 8" FFC
Wafer frame	Steel FFC 8" or 12"
Foil tension	8": 1-10mm 12": 1-15mm
Wafer cassette	13 slots

Die handling	Spec
Process temperature	Max. 470 °C
Pickup force	0.4-1.5N ±0.1N
Bond force	0.2-1.5N ±0.1N
Mixed gas	Customer specific
Collet	Pyramidal, Flat
Ejector tool	Single needle

Automation

Wafer map formats	Market standards. Full Wafer Map.
Wafer map alignment	Start and reference die functionality
Auto equipment set-up	Via SECS/GEM
Traceability	ID input by manual barcode scanning

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