Esec 2009 SSI^{E}

Solution Provider for Power Package

Today's power devices used in communications, automotive, computers, home appliances and handheld devices have entered a new era of miniaturisation. This development requires more power dissipation in small packages and asks for a more stringent process control. Besi is teaming up with key customers and major material suppliers to forge an optimum power packaging solution. Such close cooperation led to the new soft solder Die Bonder Esec 2009 SSI^{E} from the soft solder world market leader.

The Esec 2009 SSI^{E} is engineered for a variety of packages like SOT, SOD, SO, PSSO, PSOP, DPAK, TO, PQFN, Power LED and power modules on one platform. Our leading edge patented process technology and our dedication to provide solutions to our customers, help to produce power devices at the lowest price and highest performance.

New Era of Miniaturisation

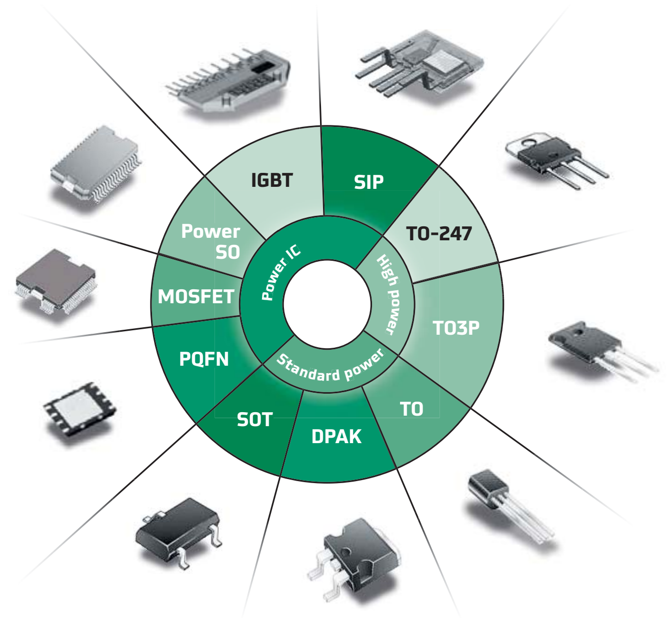
Enhancements

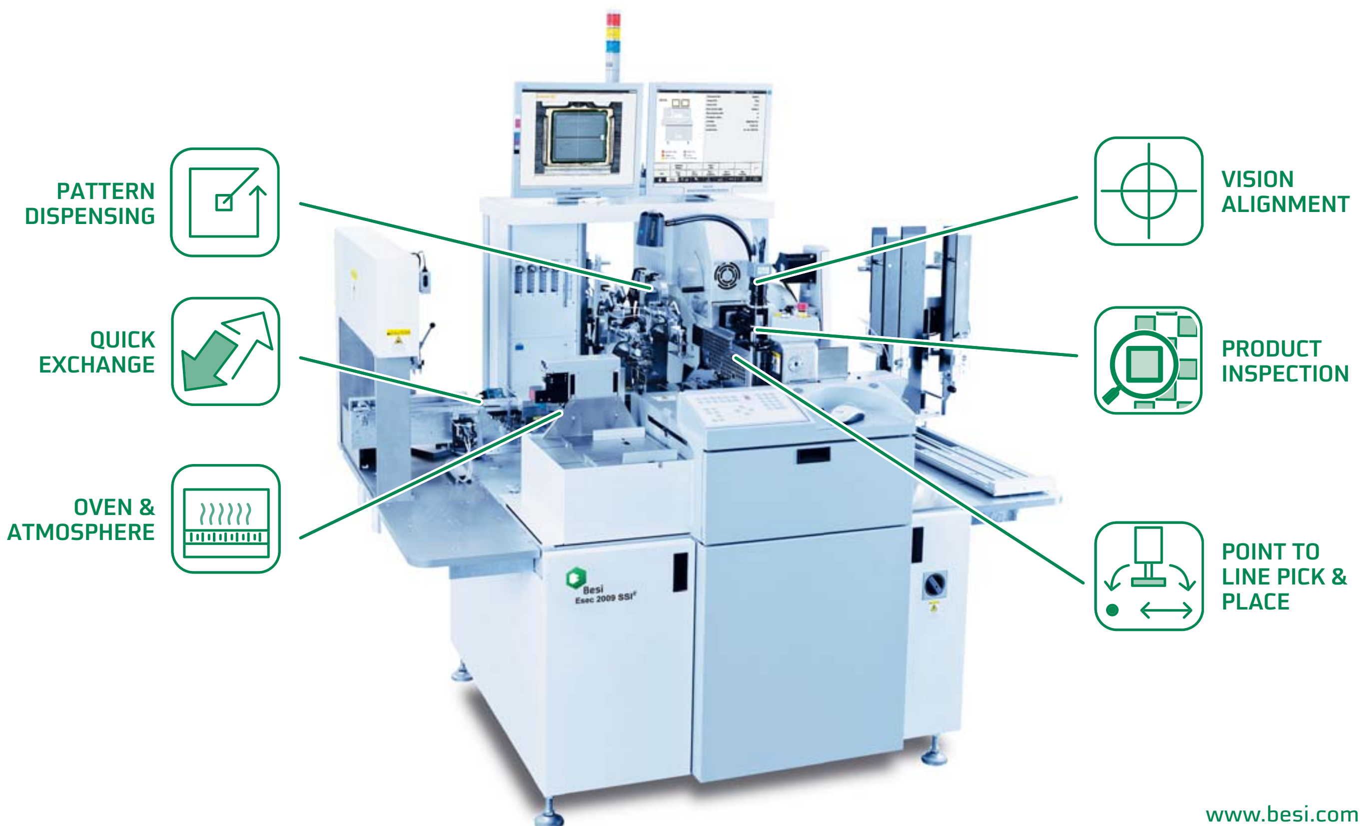
- New Dispense System
- Best Process Control
- Product Inspection

Options

- High bond force (50 N or 150 N)
- 300 mm wafer capability
- Special applications (boat and reel-to-reel handling)

Future Proof Equipment





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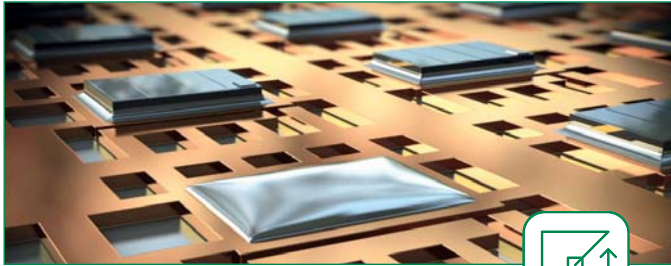
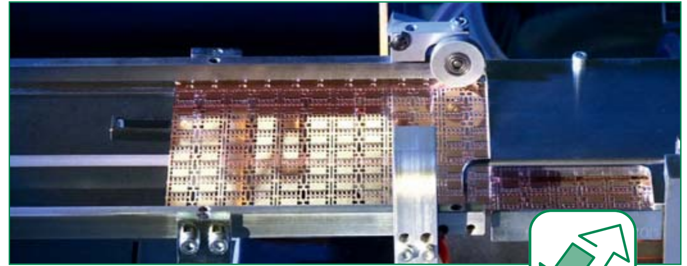


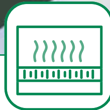
Pattern Dispensing

- New dispense process
- Programmable pattern size and BLT (tool-less)
- Full pad coverage, no geometrical limitations
- Superior wetting
- Upgradable on all 2009 SSI[E]



Quick Exchange

- Extended application range
- Quick exchange indexers
- Leadframe conversion kits
- Boat and reel-to-reel handling
- Multi die and multi pass bonding

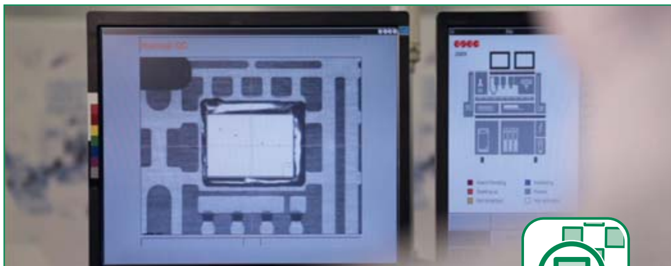


Oven and Atmosphere

- Lowest gas consumption
- Uniform gas flow
- Accurate and flexible temperature profile settings

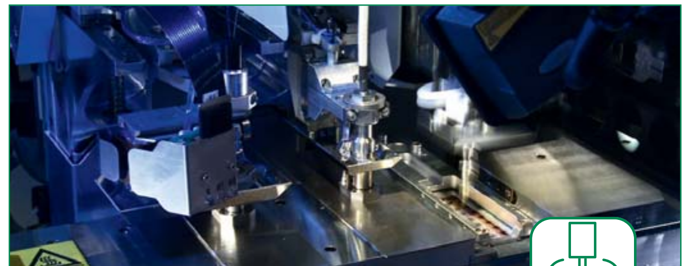
Vision Alignment

- 300 mm wafer handler option
- Reliable thin die handling
- High accuracy (optical bond centering)
- Ready for future requirements



Product Inspection

- Solder pattern inspection
- Die placement check
- Quality control



Point to Line Pick & Place

- Highest throughput with matrix leadframes
- Individually programmable pick and bond force
- High bond force (50 N or 150 N)

Productivity / Process

- Net productivity: 2,500 to 8,000 UPH typical (depending on overall equipment and material configuration)
- Temperature control: 8 zones, up to 450°, ±5°C
- Bonding time: 0 to 32 sec (programmable)
- Bonding force: 0.5 N to 20 N (programmable) / optional 0.5 N to 50 N or 1.5 N to 150 N

Wafer

- Wafer size: up to 12"
- Frame size: 6", 8", 12"
- Die size: 0.4 x 0.4 mm - 13 x 13 mm / 16 x 16 mils - 510 x 510 mils

Die Placement Accuracy

- ± 60 μm / 0.6° (3σ)
- With OBC: ± 50 μm / 0.6° (3σ)

Product dependent

Substrates and Carriers

- Max length: 280 mm
- Max width: 80 mm (100 mm optional)
- Boat and reel-to-reel handling possible

Machine Dimensions

- Footprint: WxDxH: 1970 mm x 1305 mm x 1760 mm
- Weight: approx. 830 kg / 1,830 lb