OptiML? wafer-level packaging from Tessera

Medical Design Technology

The end result is improved device functionality and increased board capacity, enabling the next generation of smaller, smarter, faster camera-enabled electronic devices. Tessera's OptiML Micro Via Pad packaging technology provides OEMs and camera module manufacturers with the benefits of reduced costs and accelerated time-to-market, without the need for modification or redesign of the image sensor wafer.

The OptiML Micro Via Pad technology is one of the industry's first available through silicon via (TSV) solutions. It is a break-through in image sensor packaging, utilizing a polymeric passivation and glass-silicon sandwich structure to enable image-sensing capabilities through the actual packaging structure. This solution enables defect-free image-sensing capabilities through the packaging.

Features and Benefits:
- Ultra thin package height
- Smallest form factor (X,Y,Z)
- Narrow, standard scribe line
- No need for image sensor design change
- Tight design rules, finer bond pad pitch
- Standard SMT assembly
- Enables 3D stacking
- Compatible with reflowable wafer-level camera
- Available in both cavity and non-cavity formats and leaded or lead-free bump formats

Reliability specifications:
- High temperature storage 150°C, 2000h
- Thermal cycling -40°C/+125°C, 1000 cycles
- Temperature humidity storage 85°C/85% RH, 2000h
- Moisture sensitivity level JEDEC MSL 1

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