

Apple MacBook Pro (14-in, M5 Pro)

Teardown from TechSearch International, Inc.



8515 Packages

WLP/PLP	8229
Laminate CSP	32
Leadframe CSP	194
MIS CSP	2
Other	58

Contents and Highlights

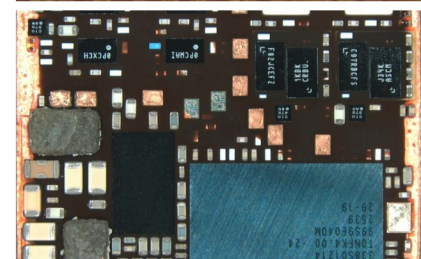
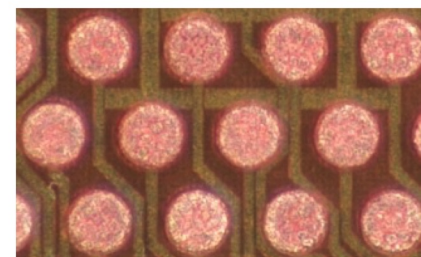
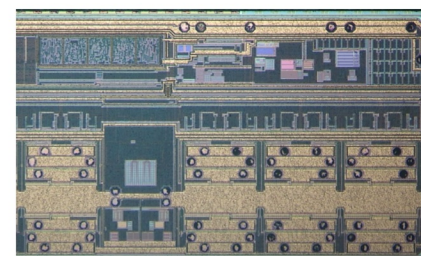
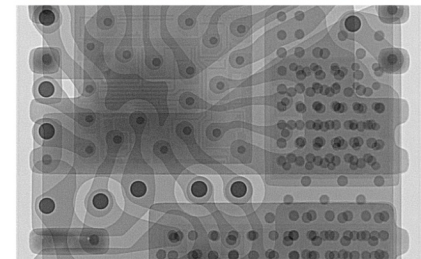
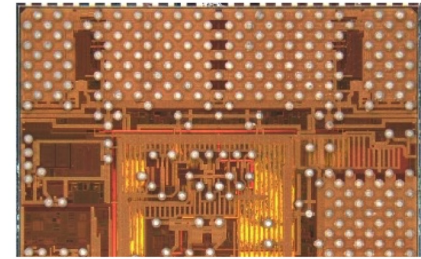
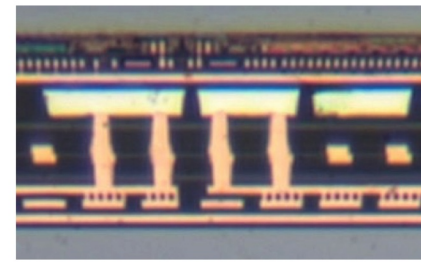
- 409-page report with package and die quantity summaries, high-resolution photos and X-rays, package dimensions, part numbers and descriptions, as well as analysis of packaging and assembly technologies discovered from package decapsulation
- All packages from laptop, 70W power supply, and MagSafe charging cable examined
- 26 additional slides with construction analysis details for packages such as:
 - Apple M5 Pro processor that uses hybrid bonding and silicon interposer packaging based on TSMC's SoIC™ technology — included are cross sections with construction analysis of package layers, TSVs in Si interposer, and Cu-to-Cu hybrid bonds
 - Infineon integrated power stage with embedded die — included are layer-by-layer analysis and details for the embedded IC and two MOSFETs
 - Wi-Fi 7/Bluetooth 6/Thread module with integrated front-end ICs
 - TI SN25A43 USB-C and PD controller with two WLPs assembled inside an FBGA

Teardowns backed by 38 years serving as the industry's trusted source for semiconductor packaging trend analysis

- Examination of all chips with emphasis on assembly and packaging technologies
- Superb quality photographs and x-ray images
- Both the packages and the die within are identified and characterized
- Detailed construction analysis of key chips and packages



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For pricing, please contact us at tsi@techsearchinc.com

