The BiTS Workshop just wouldn’t be the BiTS Workshop without at least one presentation on the test and burn-in marketplace. In this year's three presentations, first we’ll hear about the technical and market forces that are shaping the future of test and burn-in, particularly the challenges of industry cycles with the never ending quest for reduced costs. Next up will be our own Fred Taber, with his fourth annual Socket Report on the size of the market, whether its shrinking or growing, and companies that are leading the charge. This session’s final paper hones in on a market technology trend with one innovative high-density package-on-package (PoP) solution requiring test hardware to accommodate fine pitch wire-tip interconnects. Socket and test hardware development and verification studies are underway to take this technology to high volume manufacturing.

The Technical and Market Forces Shaping the Future of Test and Burn-In Sockets
John West—VLSI Research, Inc.

Socket Marketplace Report
Fred Taber—Taber Consulting

Manufacturing Readiness of Bond Via Array (BVA™) Technology for Fine-Pitch Package-on-Package (PoP)
Rajesh Katkar, Rey Co, Wael Zohni—Invensas Corporation

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Socket Marketplace Report

Fred Taber
Taber Consulting

2014 BiTS Workshop
March 9 - 12, 2014

Content

• Acknowledgement
• Annual Report
• Test & Burn-in Socket Data
• Wrap-up
Acknowledgements

• 4th Annual Presentation at BiTS
• Data was Graciously Provided by Fleck Research in their
  – Report: “Analysis of Test Sockets & Contactors”
  – 2013 Report → 2012 data
• Much More Info Can be Found in Their Report

Selected Report Data
Summarized & Charted

4th Annual Report

• The Business side of sockets
  Financial Data + Trends
  Contact Utilization
• Beyond this snapshot is more
  • Semiconductor Technology Context
  • Globalization
  • Technology Trends
Sockets Worldwide

- 11 to ‘12
  - Production Burn-in Test Total Total Test & Burn-in
    -7.6% -11.9% -1.9% -7.3% -6.2%

- 5 Year (‘12 to ‘17) Growth forecast ........19.3%

Sockets Worldwide

- 11 to ‘12
  - Production Burn-in Test Total Total Test & Burn-in
    -7.6% -11.9% -1.9% -7.3% -6.2%

- 5 Year (‘12 to ‘17) Growth forecast ........19.3%
Test Sockets & Contactors

- **Total Market**
  - 2013 report: Down 2.6% - '10 to '11
  - 2014 report: Down 1.9% - '11 to '12

- **Survey Market (2012)**
  - Top 10 Companies: $M271; 43.5% of Total Market...increase in market share vs. 2011
  - Top Company: 8.1%

### 2013 Outlook

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Test Sockets & Contactors

- 2014 BiTS Socket Marketplace Report 7
- 2013 Outlook
Burn-in Sockets

- **Total Market**
  - 2013 report: Up 1.7% '10 to '11
  - 2014 report: Down 11.9% '11 to '12
  - 2013 to '16: Up 45.6%
  - 2011 to '12: Down 11.9%
  - 2012 to '17: Up 22.3%

Test & Burn-in Sockets

- **Total Market**
  - 2013 report: Down .8% '10 to '11
  - 2014 report: Down 6.2% '11 to '12
  - 2013 to '16: Up 40.3%
  - 2011 to '12: Up 19.3%

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2014 BiTS Workshop ~ March 9 - 12, 2014
Wrap-Up

• An Additional View of the Socket Market
• Market Research Data: A Snapshot of the Business Side of Sockets
• Market Slowed in 2012, yet Significant 5 Year Growth is Projected
  – Test Sockets: ~Flat Projected 2012 to 2013
• Solid Y-Y Growth in Contact Utilization