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World PCB Production Report for the Year 2010  
Product Code: 2010WORLDPCB

DESCRIPTION

IPC's World PCB Production Report offers consensus estimates of PCB production value by country and by product type, commentary on global and regional PCB industry trends, special sections on HDI/microvia and metal-clad PCBs, and historical PCB production data on regional production trends. The estimates are developed by a team of the world's leading industry analysts.

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Sectional Design Standard for Flexible Printed Boards  
Product Code: 2223C

DESCRIPTION

Used in conjunction with IPC-2221, IPC-2223 establishes the specific requirements for the design of flexible printed boards and forms of component mounting and interconnecting structures. The flexible materials used in the structures are comprised of insulating films, reinforced and/or non-reinforced dielectric in combination with metallic materials. Revision C provides new design guidance and requirements for bends, folds and creases, staggered flexible layer bands, and strain relief fillets. Also included is a new design tutorial providing guidance on material selection, size and shape of flexible circuits and fabrication allowances. 39 pages. Released 2011.

Included in the IPC-C-1000, IPC-C-102, IPC-C-106 collections, and the 2220 Series.

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Specification for Base Materials for High Speed/High Frequency Applications  
Product Code: 4103A

DESCRIPTION

This specification covers the requirements for clad and unclad plastic laminate and bonding layer materials to be used for the fabrication of printed boards for microstrip, stripline, and high speed digital electrical and electronic circuits. In addition to updated testing parameters, inspection lot requirements, revised visual acceptance criteria, this revision incorporates a new specification sheet format for new materials that provides both mandatory (e.g., Df and Dk) requirements as well as "loose" requirements (e.g., thermal conductivity and moisture absorption) that can be certified to or called out on fabrication drawings. This new classification format allows for a reduced number of material specification sheets. 56 pages. Released 2011.

Included in the IPC-C-105, C-107 and the IPC-C-1000 Collections.

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Flexible Metal-Clad Dielectrics for Use in Fabrication of Flexible Printed Circuitry  
Product Code: 4204A

DESCRIPTION

This standard establishes the classification system, the qualification and quality performance requirements for flexible metal-clad dielectric materials to be used for the fabrication of flexible printed circuitry and flexible flat cable. It encompasses 12 specification sheets that result from the combinations of various copper foil claddings; a polymer base dielectric selected from at least two polyesters, multiple polyimides or liquid crystal polymers; and at least seven versions of polymer adhesives as well as adhesiveless bonding agents. The net result of these material combinations provide the industry with suitable clad, flexible dielectrics for fabricating flexible printed circuitry interconnections. 53 pages. Released October 2011.

Included in the C-102 and C-1000 Collections.

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Stencil Design Guidelines  
Product Code: 7525B

DESCRIPTION

This document provides guidelines for the design and fabrication of stencils for solder paste and surface mount adhesive with discussion on through-hole and mixed technology. This includes differences for tin lead and lead-free solder paste, overprint, two-print and step stencil designs. A sample order form and user inspection checklist are also included. 14 pages. Released October 2011

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Qualification and Performance Specification for High Frequency (Microwave) Printed Boards  
Product Code: 6018B

DESCRIPTION

Establishes requirements for qualification and performance of high frequency (microwave) printed boards. Covers both end product inspection and test of microwave boards for microstrip, stripline, mixed dielectric and multilayer stripline applications. It addresses final finish and surface plating coating requirements, conductors, holes/vias, and frequency of acceptance and quality conformance testing, as well as electrical, mechanical and environmental requirements. Revision B incorporates many new requirements in areas such as selection for procurement, new surface finishes, microvia requirements including hole plating thickness and copper wrap/cap plating of filled holes, laminate cracks and voids, etchback, PTFE resin smear, and thermal stress testing. 45 pages. Released 2011.

Included in the IPC-C-105, 6010-Series and the IPC-C-1000 Collections.

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Material and Process Characterization/Qualification Test Protocol for Assessing Electrochemical Performance

Product Code: 9202

DESCRIPTION

This document provides tests that record changes in surface insulation resistance (SIR) on a representative sample of a printed circuit assembly. It quantifies any deleterious effects that might arise from solder flux or other process residues left on external surfaces after soldering, which can cause unwanted electrochemical reactions that grossly affect reliability. It uses test vehicles that are intended to be representative of the electronic circuits that are in production and is a test yielding both quantitative and qualitative data. This test may be used for process qualification, demonstrating that a proposed manufacturing process or process change can produce hardware with acceptable end-item performance related to cleanliness. This test may also be used for process characterizations, including development of new processes or improvements to an existing process. 11 pages. Released 2011.

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Surface Mount Placement Equipment Characterization

Product Code: 9850A

DESCRIPTION

This document standardizes the parameters, measurement procedures and methodologies used to measure and report pick and place machine accuracy as a relationship to placement speed for a range of SMT component sizes and configurations. This product includes one printed copy of the standard and a CD with support documentation, report forms and the test material drawings in Gerber format. 40 Pages. Released November 2011.

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Future of the EMS Industry and Its Impact on the PCB Industry

Product Code: EXESUM10-11-FUTUREEM

DESCRIPTION

"Future of the EMS Industry and Its Impact on the PCB Industry" by Jack Calderon of Lincoln International Electronics Group, was presented at the IPC Executive Summit, San Jose, Calif. He builds a case for why the path to increased company value for the PCB industry is vertical expansion by mergers or acquisition of EMS companies. Calderon examines geographic issues and the challenges of capital availability and environmental requirements facing the PCB industry. This presentation includes the synchronized slides and audio.

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Spherical Bend Test Method for Characterization of Board Level Interconnects  
Product Code: 9707

DESCRIPTION

This standard on spherical transient bend testing is intended to characterize the maximum allowable strain that a surface mount component's board level interconnects can withstand in flexural loading. Whereas four-point monotonic bend test methods only address simple planar bending, spherical bend tests establish strain limits of board level interconnects under worst-case flexure conditions that can occur during conventional printed board/system assembly, manufacturing and test operations. This method is applicable to surface mounted BGA components larger than 15.0 mm on a side with organically based substrates, attached to printed boards using conventional solder reflow technologies. This document was developed cooperatively with JEDEC. 15 pages. Released 2011.  
Included in the C-103 and C-1000 Collections.

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Guidelines for Cleaning of Printed Boards and Assemblies  
Product Code: CH-65B

DESCRIPTION

Updated for new technologies including lead free, no-clean and environmentally friendly chemistries. This is a collection of information on electronic board and assembly cleaning in a single location. This major revision explains the relationship between materials, processes, and contaminants in fabrication and assembly operations. It also addresses cleanliness assessment and process control in relation to cleanliness. Color pictures help with understanding. 200 pages. Supersedes IPC-CH-65A, IPC-SC-60A, IPC-SA-61A, IPC-AC-62A, IPC-SM-839. Revised July 2011  
Included in the IPC-C-108 & the IPC-C-1000 Collections.

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Conflict Minerals - Celestica Perspective  
Product Code: EXESUM10-11-CONFMIN

DESCRIPTION

This presentation "Conflict Minerals - Celestica Perspective" by Kevin Weston, supply chain management environmental engineering, of Celestica was presented at the IPC Executive Summit Conference, San Jose, Calif. on October 4, 2011. It shows how one company implemented the Dodd Frank act in the area of conflict minerals and the requirements imposed on its 4400 suppliers. Since the act is as yet incomplete, it cannot be fully implemented, thus impacting company policies. The presentation also explores some of the challenges for the industry. This presentation includes the synchronized slides and audio.  
Released 2011.

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Disaster Preparedness: Strategies for Mitigating Supply Chain Disruption  
Product Code: EXESUM10-11-DISASTER

DESCRIPTION

This paper "Disaster Preparedness: Strategies for Mitigating Supply Chain Disruption" was presented by Greg Sheppard, chief research officer for HIS/iSuppli at the IPC Executive Summit, San Jose CA, October 4, 2011. Preparation to protect your company from disruption due to fire, earthquake, etc. at your facilities and/or suppliers is described using lessons learned from the Japanese disaster. Direct and indirect impacts are described. The paper then goes on to describe how to identify risks and possible ways to lessen their impact. This presentation includes the synchronized slides and audio. Released 2011.

Coping in an Era of Uncertainty - An Increasingly Agile Supply Chain and Lessons Learned from the Great Recession.

Product Code: EXESUM10-11-SUPCHAIN

DESCRIPTION

This paper "Coping in an Era of Uncertainty - An Increasingly Agile Supply Chain and Lessons Learned from the Great Recession" was presented by Amitabh Passi, Electronics Supply Chain and NA Handset Analyst, USB at the October 5, 2011 IPC Executive Summit Conference at San Jose, Calif. The author examines the recessions of 2001/2002 and 2008/2009 for their depth and duration and the effects on revenues and profitability on the electronics supply chain. He then explains how the recovery from the latest recession was driven by lessons learned from 2001/2002, supply chain agility, growth in emerging markets and new technologies.

This paper includes the synchronized slides and recorded audio from the presentation. 35 minutes. Released 2011

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Staying Flexible with Manufacturing when the Military is in Flux

Product Code: FLEXMAN-MN06-11

DESCRIPTION

This presentation "Staying Flexible with Manufacturing when the Military is in Flux" was presented by Steve DeWaters, President of Penumbra Strategies, Inc. on June 22, 2011, at the IPC International Conference on Flexible Circuits. With decreased military budgets and increasing data rates, more must be accomplished with fewer dollars. Photonics (embedded optics with light integrated with electronics) is one way to meet DoD requirements for increased data rates. Polymer waveguides as part of flex circuits help to meet size, weight and power constraints. This presentation includes synchronized slides and audio recorded during the original presentation. 29 minutes. released 2011.

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Joint Industry Guide Materials Composition Declaration for Electrotechnical Products

Product Code: JIG101ED4

DESCRIPTION

The Joint Industry Guide Material Composition Declaration for Electrotechnical Products has been updated to include the most recent substances for restriction. The JIG-101 is an industry materials declaration guide that facilitates reporting of material content information across the global electrotechnical supply chain. This document sets minimum requirements for a materials declaration. The document (also called JIG- 101 Ed. 4.0) now addresses the most updated regulatory requirements that require supply chain disclosure of material content in electrotechnical products. In addition, the criteria for substances to be declared have been changed, now requiring broader industry consensus and allowing companies to act proactively. 48 pages. released 2011.

This product is free. Please "Add to Cart" to download this item. You will not be charged for this download.

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IPC Midwest 2011 Technical Conference Proceedings CD  
Product Code: MIDWEST11-CD

DESCRIPTION

Proceedings from this technical conference include 18 presentations on AOI Assembly, Cleaning and Residues, Cleanliness Testing, Design for Manufacturability, Design for Reliability, Design for Test, ICT, Moisture Sensitivity, Reflow and Wave Soldering, Reliability, Selective Soldering, Solderability, Test and Inspection, and Tin Whiskers Risk Mitigation. All papers are electronically searchable by title, author and keyword. These Proceedings are available exclusively on CD and not in hard copy. The papers may be printed from the CD.  
Released October 2011.

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2010-2011 Analysis and Forecast for the Electronics Manufacturing Services (EMS) Industry  
Product Code: MR-EMSMARKET11

DESCRIPTION

Survey-based study presents data and analysis on the EMS industry, examining trends in sources of revenue, revenue per employee, services offered, markets served, manufacturing technology, capital investment, spending on equipment and materials and market size including forecasts and potential for market expansion. This study is based on data provided by a representative sample of 47 EMS companies with a total of 90 facilities worldwide that participated in IPC & EMS Annual Survey. These companies accounted for \$8.1 billion in EMS sales in 2010  
86 pages. Released 2011.

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2010-2011 Industry Analysis & Forecast for the PCB Industry in North America  
Product Code: MR-PCBMARKET11

DESCRIPTION

This survey-based study covers data and analysis on market trends in the North American PCB industry, including sales history, trends in materials, sales by product type, production mix (high-volume vs. quick turn vs. prototype), revenue trends from value added services, industry end-markets by product type, U.S. imports and exports, and forecasts for PCB production in North America and worldwide through 2014. The survey sample includes 40 PCB manufacturers with total sales (includes some overseas sales) of \$2.3 billion, representing approximately 55 percent of the North American PCB market. 74 pages. Released September 2011.

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Use of Plasma Deposition to Provide a Novel Surface Finish and Protective Coating for PCBs  
Product Code: PLASMA-IRVINE-11-11

DESCRIPTION

"Use of Plasma Deposition to Provide a Novel Surface Finish and Protective Coating for PCBs" was presented at the IPC Conference on Reliability: Assembly Process for a Reliable Product in November 2011. The paper was written by David Rund, director of business development for materials of the Christopher Group, and was presented by Chrys Shea. The author describes a new method of applying a polymer material to the surface of a PCB to improve corrosion resistance while acting to improve reliability and solderability while being environmentally friendly. The solder joints were then tested for shear strength, contact resistance, corrosion resistance and RF signal loss. This presentation includes the synchronized slides and audio. 20 minutes. Released 2011.

Automated Testing Program -- SITE LICENSE  
Product Code: OVT-111C-TEST(S)

DESCRIPTION

The Premium version of our popular Instant Online Testing for individual DVD and OVT training products. Use this program to set-up an automated computer-based testing capability, with randomized test questions and instant certificate generation for your own PC, learning network or corporate intranet.

Allows for user customization of the test questions and passing score requirement. You can also set up automatic email notification of every test record to the appropriate Training or HR personnel. Training Certification certificates may be printed by any student with a passing grade. Even add your own company logo to the online test screen.

Be safe behind your own firewall, and get the benefits of automated testing, scoring and certificate generation. Includes User's Guide and sample scripts for setting up email notification.

Licensing is by Site (single location) or Global (multi-site). Read more about our Permissible Use Policy for Online Video Training (OVT) programs for details on licensing.

Important Notes: The product code for this automated testing program should match the product code of your DVD or OVT training program -- e.g., OVT-23C-TEST goes with DVD-23C or OVT-23C programs. Product download will be a ZIP file less than 1MB in size. For online / credit card purchase only -- use the "Add to Cart" button on this page. Online purchase requires customer sign-in or registration into IPC order-entry directory. If you do not already have an account, you can create one. Product file download instructions are sent to the email address of the registered account. It is up to that person to forward download information as well as Account ID and password to the end-user as required.

DISCOUNT PRICING AVAILABLE: Contact the Media Training Dept. for special pricing on purchase of multiple tests, or for questions about the automated OVT testing program.

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Terms and Definitions for Interconnecting and Packaging Electronic Circuits  
Product Code: T-50J

DESCRIPTION

This essential industry standard provides descriptions and illustrations of electronics interconnect industry terminology to help users and their customers break down language barriers. Revision J contains nearly 400 new or revised terms, including new terminology for chip scale and area array packaging, cable and wire harness technology, assembly processing, moisture sensitive components, and microvia technology. Also includes commonly used industry acronyms. 121 pages. Released 2011.

Included in Collections C-102, C-103, C-105, C-106, C-107, C-108 and C-1000

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Underfill Selection and the Impact on Reliability  
Product Code: UNDERFIL-IRVINE11-11

DESCRIPTION

"Underfill Selection and the Impact on Reliability" was presented at the IPC Conference on Reliability: Assembly Process for a Reliable Product in November 2011 by Dr. Brian Toleno, director of technical services and applications for Henkel. The author defines underfill and describes the types. He explains the need for underfill and where it is typically used. He also explains the effects of different types of underfill in augmenting product reliability whether environmental or mechanical and their effect on reworkability. This presentation includes the synchronized slides and audio. 27 minutes. Released 2011.