DALLAS CHAPTER IS PROUD TO PRESENT.....

Dallas Expo & Tech Forum
Tuesday March 7th, 2017

Location: Plano Center 2000 E. Spring Creek Pkwy Plano, TX 75074

7:30 AM
Registration opens

10:00AM
Expo Opens

Special thanks to our Breakfast Sponsor Precision Technology, Inc.

Special Thanks to our Technical Sessions Sponsor, Summit Interconnect!
Free Technical Program & Schedule:

7:30AM

Registration opens

8:30AM – 9:15AM

IPC 610—What it is and What are the New Revision Changes?

Speaker: Ed Westrick, Master IPC Trainer, Verion Training Systems

This will cover the purpose of the IPC-A-610 Acceptability of Electronic Assemblies manual in the manufacture of electronic assemblies, with a primary focus on the most recent changes.

9:15AM – 10:00AM

The Repositioning of the EMS Industry

Speaker: Eric Miscoll, Charlie Barnhart & Associates

The electronics manufacturing services (EMS) industry continues to change. Beginning with a 5 year industry forecast, this presentation will consider the factors that are driving companies within the industry to reposition their business models. Also included will be a case study and management metrics for EMS companies with annual revenues less than $100M.

10:00AM

Expo opens

11:00AM – 11:45AM

The Do’s and Don’ts of Wearable Device Design

Speaker: Keith Beers, Ph.D., Exponent

The new and rapidly advancing field of wearable electronics has the potential to change the way we interact with electronic devices and collect data about ourselves in the pursuit of quality of life improvements. This talk will provide an overview of what wearable electronics are, some of their current applications, as well as some potential future impact(s). Additionally, a discussion of the do’s and don’ts in the design and manufacture of wearable electronics, as learned by a failure analysis firm, will be provided.
12:00PM  Complimentary Lunch

Join us for Complimentary lunch and Networking on the Show Floor - PLUS Door Prize Drawings!

Special Thanks to Our Lunch Sponsor: NPI Technologies

Free Technical Program & Schedule Cont:

12:00PM

Complimentary Lunch

Join us for Complimentary BBQ Lunch (with a Vegetarian Option) and Networking on the Show Floor - PLUS Door Prize Drawings!

1:30PM – 2:15PM

**Flex Circuit Design and Material Selection -**

_Speaker:_ President, Eatman Associates for PFC Flexible Circuits

Flex circuits enable smaller, more elegant packaging of electronic systems. They can be found in virtually every digital handheld device and smart watch. Flex circuit usage is proliferating in additional market spaces because of performance and mechanical advantages.

The list of available flex circuit materials is growing, providing new opportunities for use in higher frequency and high temperature applications. Flex circuits can be excellent substrates for impedance controlled stripline and microstrip applications, replacing bulky coaxial cables and other wiring. Multi-layer flex is replacing traditional rigid flex for many high- density SMT circuit implementations, at a lower cost.

Designers who regularly work with rigid PCBs face new challenges when dealing with the mechanical aspects of flex. This presentation provides an overview of the differences between flex circuit design and rigid PCB design, and discusses the newest materials available in the world of flex and rigid flex.

3:00PM

Expo Closes
Current Exhibitor List: Corporate Members are in Bold

Alpha Assembly Solutions
ASM Assembly Systems, LLC
BBM, Inc.
Benchmark Electronics
CalcuQuote
Cirexx International
Conductive Containers, Inc.
Creative Electron, Inc.
DG Marketing Corporation
Eatman Associates
ERSA North America
Europlacer Americas
Fabricator 3D Printers by K&L Services Group Inc.
FCT Assembly
GPD Global
Hisco
i3 Electronics, Inc.
ICAPE-USA
IMAPS
JBC Tools USA Inc.
Kester
Krypton Solutions
KutzSales
Lone Star Circuits
LPKF Laser and Electronics
Microtech Laboratories LLC
NCAB Group USA
Nikon Metrology, Inc.
Niltronix Circuits
Nordson ASYMTEK/Torenko & Associates
Nordson DAGE
NPI Technologies, Inc.
PAC Global, Inc.
Pace Worldwide
Parmi USA, Inc.
Precision Technology Inc.
ProActive Process Solutions Group
Production Automation Corporation (Prime/PAC)
Prototron Circuits
Rehm Thermal Systems LLC
Rich Sales
SMAC MCA
Smart Splice LLC
Southwest Sytems
StenTech
Summit Interconnect
Sunshine Global Circuits
Super PCB
SVTronics, Inc.
Texmac/Takaya Inc.
Tharium Corporation
The IPS Group, LLC
Transforming Technologies
Trylene, Inc.
Vision Engineering, Inc.
Yxlon FeinFocus
ZESTRON Americas
Presidents Message

Greetings to SMTA Dallas Chapter members and guests.

This year we are once again very excited about the Dallas EXPO on March 7th that you can read about in this newsletter. It is free to attendees and a fabulous use of your time. This is actually the best and largest of the Chapter EXPOs and the best thing is that it is local with no travel required. We have great speakers, lots of great suppliers with new materials and equipment, and good food. You can’t beat that! Register soon on the EXPO web site and you have a chance to win a door prize. Bring your co-workers and share the ride. See you there.....

Gary Tanel Dallas Chapter President.

Dallas Chapter Membership Rolls— 113 Members !!

We welcome our newest members to the SMTA family:

Christopher LaVine Individual Lockheed Martin Missiles and Fire Control
Cheryl Hatfield Individual

Ali Aflaki Associate (Student/Retirees) Everlight Americas E-Commers
Summit Interconnect

Corporate Members: 18 Corp Participating members: 14, Individual Members: 54,
Global Members: 3, Participating Members: 14,
Associate/Student Members: 10

Dallas Chapter Corporate Member List - Jan 2017

ASSET InterTech FHP Reps Philips Entertainment
Barry Sales, Inc. Fujitsu Network Communications Precision Technology, Inc.
BBM, Inc. GSC (Garland Service Company) Roper Resources, Inc.
Circuitronics JTAG Technologies Southwest Systems Technology Inc
Conescus LLC Keysight Technologies .SPEA America
CVInc. Krypton Solutions Summit Interconnect
CR Assembly Corp Libra Industries Sunshine Global PCB Group
DG Marketing Corporation Mek Americas LLC SVTronics, Inc
Dragon Circuits Morgan Newton Company .The IPS Group, LLC
E.T.S. Group, Inc. National Circuit Assembly Techni-Tool, Inc.-
Electrolab Inc. NPI Technologies, Inc. Trilogy Circuits, Inc.
EWD Solutions One Source Group Variosystems, Inc.
PAC Global, Inc. VI Technology
Upcoming Chapter meetings

Chapter Calendar for 2017:

March 7th—2017
Dallas Chapter SMTA Expo

April 7th - 2017
Counterfit Parts

May 5th - 2017
HDI Manufacturing and Design

June 2nd - 2017
Stencil Printing and Design

Sept 8th –2017
Advanced IC Packaging

MEETING LOCATION
Aboca’s Italian Grill,
100 S Central Expy #63,
Richardson, TX 75080

11:00 am (doors open for networking)
Lunch buffet with multiple entrees, salad and dessert.

To attend, we ask that you RSVP reply by COB April 5th to this e-mail
GaryT@McDonald-Tech.com

Agenda

11:00-11:30 check-in & Networking
11:30 Lunch Begins
11:45 Meeting Begins

Welcome & Introductions
Chapter Announcements
12:00 Technical Presentation by the
Speaker: Donald Banks
1:00 Technical Round Table Conversation

Pricing: (CREDIT CARDS NOW ACCEPTED on Website)

$ 20 cash/check, Or charge (in advance on web site) for:

Members, Guests of Members
Visitors & non-members
From its traditional use to more unconventional uses, the via has gone through some changes over the years. In this month’s column, I will examine issues such as:

- Expressing tolerances for vias
- Blind and buried vias
- When, where, and why you should fill vias
- Via-in-pad
- Stacked vias
- Vias for thermal applications

**Expressing Via Tolerances on a Drill Drawing**

I get this phone call at least once a week asking: “What is the smallest mechanical via that can be done by your company?”

This is followed on my end by, “What will the tolerance for the vias in question be?”

If they say, “Oh, your standard +/- .003” tolerances,” I am obligated to tell them the min via would be around .0078” with a signal pad of at least .014” and an anti-pad of at least .018”. Usually, at this point I hear a lot of choking and coughing and they say, “But I am egressing from a .4mm pitch BGA, I don’t have that kind of room!”

This is where we talk tolerance. If they are true vias where the finished size is NOT of any consequence, we say, “Why not call them out as +.003” minus the entire hole size?”

At that point I tell them that we can drill smaller and require less signal pad and anti-pad size, which opens the customer up for some routing for these fine-pitch parts. While we are at it, let’s talk about pitch. Many times, we are approached by customers talking about a specific pitch between mounts or pads, such as .4mm or .5mm pitch. Understand that without a design to see the via image data, it is difficult for a fabricator to properly understand what pitch means to the customer.

The pitch is the distance from the center of a given entity to the center of an adjacent entity. This can mean different things based on pad/mount size. Let me give you an SMT pad as an example:

A .5mm pitch means .0197” between the centers of two BGA pads or surface mounts. This seems like a very reasonable distance, given today’s circuit board geometries. However, what if the designed surface mount pad width is .015” wide? This would mean a .5mm pitch would leave only .0047” edge to edge between the mounts. This gives you little or no room to route a trace between mounts at that width and pitch.

Clearly as the pitch between parts decreases based on today’s shrinking chip footprints, the associated surface mount or BGA pad widths need to decrease as well to be able to route even a .003” or .004” trace between them.

Karl Doebbert
Special Thanks to the following volunteers!!

**Technical Advisor (Appointed)**: Viswanadham Puligandla Ph.D. (Nokia (Retired))  
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**Technical Advisor (Appointed)**: Riki G. Brown (LeeMAH Electronics)  
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**Set Up Committee (Appointed)**: Jimmy Fallin (Philips Entertainment)  
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**Social Media Editor (Appointed)**: Chintan Sutaria (CalcuQuote)  
**Phone**: 909-278-8233  
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**Program Director (Appointed)**: James Eatman (Eatman Associates)  
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**Board Liaison**: Richard Henrick (Sanmina Corporation)  
**Phone Contact**: 256-882-4579  
**Email Address**: richard.henrick@sanmina.com

**Technical Committee (Appointed)**: Michael Barnes (Fujitsu Network Communications, Inc.)  
**Phone**: 972-479-2280  
**Email**: michael.barnes@us.fujitsu.com
REASONS TO JOIN YOUR LOCAL SMTA CHAPTER

- Do you have something to share such as new technologies or new products?
- Are you new in a sales territory – do you know all the players? Do they know you?

Be informed and involved on the Local Chapter level:

- Take advantage of technical information provided at local meetings Get to know colleagues in your local area
- Network for technical information and get to know companies and people in your local area
  - Share information with colleagues on new products and services

THE MISSION OF SMTA

The Surface Mount Technology Association (SMTA) membership is a network of professionals who build skills, share practical experience and develop solutions in electronic assembly technologies and related business operations.

MEMBERSHIP DUES

Participating: $50 - If your company (same location/division) holds a Corporate Membership it’s employees are eligible to receive the full range of benefits at a discounted price.

Individual: $75 - This membership is designed for individuals who wish to join SMTA to receive all the benefits independent of a Corporate Membership.

Corporate: $450 - A corporate membership in SMTA provides discounts to employees located in the same location/division where the Corporate Membership is held.

Member and Student $19 The Student/Retiree Membership is available to all full-time post-secondary students and retirees.

Non Members: $25

New or Unemployed: Free

HOW TO JOIN

On-line at www.smta.org