



Minutes of Automated Component Handling Committee (ACH)

Thursday, 19 April 2007

Holiday Inn Bayside

Sand Diego, CA

ACH Committee's scope:

Develop and maintain engineering standards and publications for tape, reels, magazines, trays, etc. for handling components in production. Also, provide technical input to US national positions on related international standards issues and proposals.

Attendees:

Last	First	Company
Adams	James	3M Company
Ahmed	Aqeel	Jabil Circuit, Inc.
Aldeen	Bill	Nu-Way Electronics
Balbuena	Mike	Jabil Circuit, Inc.
Biernacki	Joe	Stackpole
Bloom	Ray	Advantek, Inc.
Carey	David	Intel Corp.
Carter	Scott	Tek Pak, Inc.
Farrell	Michael	3M Company
Griffith	Michael	KOA
Gutentag	Charles	Tempo Electronics
Hall	Bill	Taylorreel Plastics
Herrera	Gonzalo	Jabil Circuit, Inc.
Laven	Doug	V-Tek, Inc.
Mikoski	Ed	EIA/ECA
Pollock	Christine	Presidio Components
Reynolds	Chris	AVX
Romm	Doug	Texas Instruments
Sipes	Henry	Samtec, Inc.
Wischoffer	Scott	Fuji America
Wyatt	Derek	Keaco, Inc.

1. Call to Order

The meeting was called to order at 8:10am by Chairman Scott Carter.

2. Membership & Attendance – Introductions

Introductions were made by the attendees, and a quorum was present. Mr. Carter opened a discussion regarding the accessibility of the EIA website. Mr. Ed Mikoski will investigate and report back to Mr. Carter.

Member Organizations Present	San Diego	Reno	Ft. Lauderdale	Memphis	New Orleans
3M	Y	N	Y	N	Y
Advantek, Inc.	Y	Y	Y	N	N
AVX	Y	N	Y	N	N
Fuji America Corp	Y	N	^Y	n/a	n/a
Jabil Circuit, Inc.	Y	Y	Y	^Y	n/a
Keaco, Inc.	Y	Y	N	Y	Y
KOA	^Y	n/a	n/a	n/a	n/a
Nu-Way Electronics	Y	N	Y	Y	Y
Presidio	Y	N	N	^Y	n/a
Samtec	Y	Y	N	Y	Y
Stackpole	^Y	n/a	n/a	n/a	n/a
Taylorreel	Y	Y	Y	Y	Y
Tek Pak, Inc.	Y	Y	Y	Y	Y
Tempo Electronics	Y	Y	^Y	n/a	n/a
Texas Instruments	^Y	n/a	n/a	n/a	n/a
V-Tek, Inc.	Y	Y	Y	N	N

^ Indicates activated as member of committee

Member Organizations Absent	San Diego	Reno	Ft. Lauderdale	Memphis	New Orleans
IBM	N	^Y	n/a	n/a	n/a
KEMET Electronics	N	Y	^Y	n/a	n/a
Samsung Electro-Mechanics	N	Y	^Y		
Vishay	N	Y	Y	Y	Y
EDG Taping Equipment	N*	N*	N	N	Y
Hover-Davis	N*	N*	N	N	Y
Yageo/Phycomp	N*	N*	N	N	Y

* Indicates not used in determination of quorum due to record of non-attendance or withdrawal

Other Organizations Present	
EIA/ECA	Y
Intel	Y

3. Approval of Agenda

A motion was made to accept the meeting agenda by Mr. Bill Aldeen and seconded by Mr. Henry Sipes. The motion carried with no objections.

4. Approval of September 28, 2006 minutes

A motion was made to accept the September 2006 meeting minutes by Mr. Scott Wischoffer and seconded by Mr. Henry Sipes. The motion carried with no objections.

5. Correspondence

Going forward a copy of the EIA-468 task force minutes will need to be sent to Mike Farrell and James Adams of 3M.

6. Sub-Committee & Working Group Reports

6.1 Snapshot of current projects and documents—Scott Carter

Discussion regarding if documents are superseded, Mr. Mikoski will contact IHS to add key words to search blocks.

6.2 Update on disposition of EIA-481-A, EIA-481-1, EIA-481-2, EIA-481-3, EIA-783, and EIA-784—Ed Mikoski

All above docs will be superseded by 481-C.

6.3 Update on archival of ACH-2000—Mikoski

Input from IHS/Global/EIA will need to be obtained with regard to the proper terminology for an archived document. The archival of ACH-200, EIA-726, and EIA-763 is an administrative task to be coordinated by Mr. Mikoski with EIA/Global.

6.4 Update on archival of EIA-726 (PN-5128) and EIA-763 (PN-5129)--Mikoski

6.5 Update on ACH-PEPS Collaboration Task Force—Hand over EIA-519 and EIA-383 back to S-1 committee—Mike Lauri, Mikoski, Dave Ritchey

Mr. Mikoski reported that the S1 committee will archive these two documents. The ACH committee will strike these docs from its agenda and reference the S1 group's documents.

6.6 Update on Polarized Component Orientation Bulletin—Mikoski/Carter

The group agreed to include new wording and a new diagram from discussions of past meetings. Mr. Carter will send an email to Ms. Cecelia Yates with the appropriate documentation of what needs to be done.

6.7 Update on ballot to reaffirm EIA-296 (PN-5131)—Coler

It was unclear if ballots were sent out for re-affirmation. Mr. Ted Coler, not present at this meeting was to report on the ballot issue. Mr. Mikoski will speak with Mr. Coler regarding this issue.

6.8 Update on publication of EIA-747 and EIA-704—Mikoski/Carter

The newly updated version of EIA-747 has been published and sent to committee members. A copy of EIA-747 will need to be sent to Mr. Adams of 3M. The balloting for a revised version of EIA-704 has been completed, and it has been approved for publication. Mr. Carter will contact Ms. Yates regarding the execution of the publication.

6.9 EIA-468 Task Force (PN-5132)--Bill Aldeen, Doug Laven

Mr. Aldeen presented minutes from the EIA-468 task force meetings, as well as reported on the members that makes up by the committee. A draft standard is still being worked on which closely resemble the IEC and Japan standards with more dimensions in tables, and fewer notes. The significant developments made by the committee can be found within the report prepared by Mr. Aldeen. Any suggestions from the ACH members regarding EIA-468 are welcome per Mr. Aldeen. In a related action item, Mr. Charles Gutentag will be attending the IEC meeting in Helsinki and research notes of IEC60286-2. Mr. Gutentag will report his findings back to this group.

Mr. Aldeen also presented a draft of EIA-468 Rev03. The timeline to release this draft will be scheduled by the task force committee upon making the changes pointed out by Mr. Aldeen.

6.10 Small Width/Pitch Task Force (PN 5081)—Discussion of IEC TC40/WG36 proposal for 4-mm wide x 1-mm pitch tapes (40/1817/CDV)—Charles Gutentag

It was reported that many of the task force members are no longer available to meet. Mr. Mike Farrell reported that Mr. James Adams will replace Mr. Curt Maynes as a member of the Small Width/Pitch Task Force.

Mr. Gutentag reported that there will be an IEC TC40/WG36 meeting in Helsinki, Finland on June 18, 2007. The agenda involves discussions on 2 new types of tapes to be added to the IEC 60286-3 standard:

- Type V: Packaging of surface mount components on continuous pressed tapes--40/1785/CDV: end of vote 23-Feb-2007
- Type VI: Packaging of surface mount components on blister carrier tapes 4 m in width (W4P1)—40/1817/CDV: end of vote 25-May-2007

The Helsinki agenda calls for discussion of comments received from both of these CDVs. Concern of component rotation as well as the ability to remove the component from the pocket was expressed by Mr. Gutentag in the IEC proposals. Mr. Mike Farrell commented that the tolerance of embossed, plastic punched, pressed and paper tape will have different properties and may have the ability to hold different tolerances in the areas of P2, P0 and P0. Other discussion on static discharge and 'fluff' were also discussed as problematic topics that the IEC group will need to review. It was recommended by Mr. Gutentag that ACH should not continue on any further work on the W4P1 tapes until after the IEC TC40/WG36 meeting on June 18, 2007.

Mr. Carter asked if the ACH committee could make suggestions to IEC. Mr. Mikoski asked if the IEC puts out their draft to balloting or only reviewed by the committee. Mr.

Gutentag informed the group that CDVs have been sent out to TAG members. Mr. Mikoski also expressed some concern that the ACH group has no real link to IEC documents regarding passive components. Mr. Carter will check with Cecelia Yates to ensure that he is a part of the TC40 TAG group. As a note, Mr. Kurt Zipp is the TAG for the US voting body.

Mr. Gutentag presented the British UK NSI comments from Mr. Ken Ball for the group to examine regarding IEC60286-3 part V (40/1785/CDV) and IEC60286-3 part VI (40/1817/CDV) in which serious reservations were raised regarding these proposals. Mr. Carter shared Mr. Gutentag's comments regarding these proposals, which were in general agreement with the UK response. Mr. Carter will follow up on the suggestion that a formal document be sent to the IEC, stating that the ACH committee would endorse the comments presented at this April 19, 2007 meeting.

Mr. Gutentag motioned that, 'from a cursory review standpoint regarding parts V and parts VI that any new changes and revisions need to be reviewed before the information is released for publication'. Mr. Scott Wischoffer seconded the motion. The motion carried with no objections.

Topic 6.10 Tabled with following motion:

In order for the ACH group to have an accumulative voice to communicate with IEC, a motion was made by Mr. Mikoski that Mr. Carter is made the ACH, IEC TAG to USTAG, Mr. Kurt Zip. Mr. Chris Reynolds or Mr. Gutentag will act as committee liaison in the event Mr. Carter is unable to fulfill this roll.

6.11 ACH Application Guide--Status Report—Sipes

Mr. Henry Sipes presented the progress made to the Application Guide. Mr. Sipes also asked for committee input regarding ESD Sensitive and Moisture Sensitive Applications, document reference numbers as well as other areas of the Guide that need updating. After group discussion, Mr. Carter if the ACH group would review the Applications Guide and include comments based on their areas of their expertise.

Mr. Sipes also requested that there be an easier way to upload information from the ECA web page for members who are working on documents. Mr. Sipes also mentioned that the Application guide be one of the documents that is downloadable for the review of the committee members. Mr. Mikoski stated that the group can use the ECA Technology message board that is password protected for ACH members. As a note to the group, documents need to be uploaded to the message board by Mr. Mikoski.

6.12 Editing Committee—Recommendations for improved orientation guidelines in EIA-481-C— Teri Arguelles, Gonzalo Herrera, Chris Reynolds, and Pete Swanson.

Mr. Gonzalo Herrera presented Jabil's plans to edit 481-C as well as to follow IPC-7351 (draft document) and enhanced their internal Polarity Diagram specification to accommodate sole source parts. Mr. Herrera presented the group with supplier feedback

regarding special orientation, none of the suppliers referenced in his presentation are doing any special orientation for other companies providing manufacturing services. Mr. Herrera also presented IPC 7351 to show component zero orientations of pin 1 location. This led to much discussion regarding the differences between 481-B and 481-C orientation language.

In closing Mr. Herrera mentioned that the ACH committee should consider the following:
Creating Errata for SOT packages
Clarify QFN and QFP requirements i.e. add graphics
Verify EIA 481-C verses IPC7351 (draft document)
Go forward on editing the EIA-481-C documents

Mr. Doug Romm requested that the ACH committee make 481-C more 'reasonable' instead of creating more language in the standard.

In his presentation, Mr. Romm expressed a concern regarding the terminology around termination #1 and orienting features between 481-B and 481-C. This concern was made aware to the group regarding QFP / TQFP orientation. This new language can change the orientation of the component between quadrant one and quadrant two.

This committee is strongly opposed to IPC publishing its own orientation standard. Mr. Romm mentioned that research needs to be completed by this group to understand why and how components are to be orientated, and not just take the word of how various users are currently packaging these components.

A motion was made to form a task group to review 481-C regarding orientation by Mr. Romm and seconded by Mr. Mike Balbuena. The motion carried with no objections. A task force committee was formed and currently consists of Mr. Herrera that will also act as committee Chair, Mr Romm, Mr. Michael Griffith, and Mr. Sipes.

Mr. Carter will contact the IPC Chairperson to express our concern regarding multiple standards addressing orientation as stated in IPC7351. Mr. Aldeen noted that the task force should only address the orientation issue to ensure a speedy end.

7. Guest Presentation—None

8. New Business

8.1 Updated list of ACH standards will be place on website

8.2 Advanced Cover Tape Technology for Electronic Component Packaging—James Adams (3M)

3M presentation

Mr. James Adams presented information regarding Advance Cover Tape Technology Universal Cover Tape (UCT). 3M is asking to introduce two new terms to the standard; 'removal force' and 'peel initiation.' This will be review by the task force and worked

into the new language. Mr. Adams asked the committee to consider amending 481-C paragraph 4.11 to read ‘the cover tape for each style and material of carrier shall have a peel strength or removal force from 0.1 N to 1.0 N (10 grams to 100 grams calibration scale reading) for 8mm carrier tapes. The removal force for each style and material of carrier shall have a force of from 0.1 N to 0.7 N (10 grams to 70 grams calibrated scale reading) for 8mm and 12mm carrier tapes.’*

*Proposed changes are underlined

Mr. Aldeen moved to form a Task Force to review 3M’s request, second by Mr. Farrell. Motion passed. The motion carried with no objection.

A new Task Force to look into the cover tape issue was formed. The group consists of Mr. Farrell acting Chair, Mr. Adam, Mr. Bloom and Mr. Joseph Biernacki. A project PIN will be assigned by the ECA office.

9. Old Business

9.1 Update on tape splicing results/guidelines--David Carey (Intel)

Mr. David Carey presented Intel’s Welding Carrier, to eliminate ruminant lots. Mr. Carey will have more information for discussion for the next meeting in San Antonio to review 481-C language.

9.2 Marketing and new membership update--Status of brochures

The EIA logo needs to be reviewed for the marketing pamphlet. Mr. Mikoski has a new PDF of the logo. Mr. Aldeen will also review the text of the pamphlet and set up a conference call with Mr. Sipes, Mr. Laven and Mr. Bill Hall.

9.3 Mr. Farrell asked about the wavy tape issue from past meeting discussion. Mr. Aldeen addressed this topic by reminding the group that samples were presented to recreate the problem. It was found that if wavy verses flat exist, a variation in the pull test would be the result. At the time of the September 28, 2006 meeting, the committee decided this was a non issue going forward. However, Mr. Aldeen expressed that the group is still interested and concerned about wavy tape. This will be reviewed at the next meeting by Mr. Carey and Mr. Sipes to determine a method of measurement.

10. Future Meeting

San Antonio September 24 – 27, 2007

11. Adjournment

Motion to adjourn was made by Mr. Gutentag, second by Mr. Romm. The motion carried with no objections.

This meeting was conducted in accordance with the EIA Legal Guidelines and the Manual of Organization and Procedures.

Scott Carter
Chairman

Doug Laven
Secretary

