



Minutes of Automated Component Handling Committee (ACH)

Thursday, 19 MAY 2005 Chateau Sonesta Hotel New Orleans, LA

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:

NAME	COMPANY
Bill Aldeen	Nu-Way Electronics
Tom Auger	NEPTCO
Philip Barnett	EDG Taping Equipment
Ed Bishop	Taylorreel
Scott Carter	Tek Pak, Inc.
Ted Coler	Vishay
Rick Howe	Hover-Davis, Inc.
Mark Keatts	Keaco, Inc.
Curt Maynes	3M
Ed Mikoski	EIA/ECA
Dave Ritchey	Yageo/Phycomp
Doug Romm	Texas Instruments
Henry Sipes	Samtec, Inc.
Derek Wyatt	Keaco, Inc.
Jason Young	KEMET

1. Committee Organization & Procedures

Chairman Scott Carter opened the meeting at approximately 8:15am followed by a round of self-introductions of the attendees.

2. Membership & Attendance

An attendance sheet was circulated.

<u>Member Organizations Present</u>	<u>Present at this meeting</u>	<u>Present at previous meeting?</u>	<u>Present at meeting prior to previous?</u>
3M	Y	Y	Y
EDG Taping Equipment	Y	Y	N
Hover-Davis, Inc.	Y	Y^	n/a
Keaco, Inc.	Y	Y	Y
Nu-Way Electronics	Y	Y	Y
Samtec	Y	Y	Y^
Taylorreel	Y	N	N
Tek Pak, Inc.	Y	Y	Y
Vishay	Y	Y	Y
Yageo/Phycomp	Y	Y	Y

^Indicates activated as member of committee

<u>Member Organizations Absent</u>	<u>Present at This Meeting?</u>	<u>Present at previous meeting?</u>	<u>Present at meeting prior to previous?</u>
Advantek, Inc.	N	Y	N
AVX	N	Y	Y
Entegris, Inc.	N	N	Y
GE Advanced Materials	N	N	Y
V-Tek, Inc.	N	Y	Y
Vandenham Consulting*	N	N	Y

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

<u>Other Organizations Present</u>
EIA/ECA
KEMET
NEPTCO
Texas Instruments

3. Approval of Agenda

A motion was made to accept the meeting Agenda by Bill Aldeen and seconded by Ted Coler, which carried unanimously.

4. Approval of Minutes

The group reviewed the previous Draft Minutes. A motion was made to accept the October Minutes by Ted Coler and seconded by Bill Aldeen, and the motion carried unanimously.

5. Correspondence

- 5.1. There was quite a bit of discussion on the orientation of tantalum chip and multilayer ceramic chip capacitors and the apparent conflict between the longstanding industry orientation convention and that called out in EIA-481-C. Jason Young of Kemet drew a diagram of how industry has always oriented such polarized components so that the marked anode is oriented toward the opposite side of the sprocket holes. In other words, the so-called right-hand orientation places the cathode on the sprocket-hole side of the carrier tape.
- 5.2. To temporarily clarify this apparent conflict in the EIA-481-C standard, Bill Aldeen made a motion to include the diagram from the 1994 Standard EIA-481-1-A as a component bulletin to be posted on the ECA website.

ACTION ITEM: A Task force named “Polarized Component Task Force” has been established to draft proposed language to change/clarify the current standard. The members are Jason Young from Kemet, Ted Coler Vishay, Dave Ritchie from Yageo/Phycomp and Chris Reynolds as the chair.

6. Sub-Committee & Working Group Reports

- 6.1. Presentation by Curt Maynes 3M on all of the different ACH standards and their timeline. Mr. Maynes will continue to expand and develop the standards timeline. The list of active standards will be reviewed at each successive meeting going forward.
- 6.2. TASK FORCE: EIA-468 is due for updating do to the age and the fact that some changes are necessary and the need for cross communication with other industry standards. Ted Coler to coordinate with IEC with Bill Aldeen and Doug Laven as chair. Curt Maynes will help with JEITA.
- 6.3. **ACTION ITEM:** EIA-481-1 (8mm & 12mm Punched and Embossed Carrier Taping of Surface Mount Components for Automatic Handling) because its contents are currently within EIA-481-C.
- 6.4. **ACTION ITEM:** EIA-784 (Guidelines for Reel Configuration and Dimensions for Reel Diameters Larger Than 360 mm) needs to be rescinded. This was utilized in applications of 16mm to 56mm carrier taping, but is now covered in EIA-481-C.
- 6.5. **ACTION ITEM:** EIA-296 needs to be reviewed by Ted Coler and recommend for re-submission upon completion of review.

- 6.6. **ACTION ITEM:** EIA-726, EIA-747, EIA-763 will be presented to the committee by the next meeting in electronic format and from there a decision will be made by the committee to accept and archive.
- 6.7. **ACTION ITEM:** An electronic version of EIA-704 to be created by Scott Carter in which the rescinded EIA-704-1 sub document of the current EIA-704-SET document will be removed, and the updated EIA-704 standard will be totally concerned with mechanically interlocked tapes. The updated EIA-704 document will be reviewed and its disposition determined at the next meeting.
- 6.8. **ACTION ITEM:** ACH 2000 and EIA-705 will be reviewed at the next meeting. Ed Mikoski will provide copies of each for the committee.
- 6.9. ACH-PEPS Collaboration Task Force- Dave Ritchie reported that the tabulation of EIA-519 and EIA-383 ballots was not completed to his knowledge. Ed Mikoski will investigate what happened from ECA's point of view. The disposition of these documents will be decided at the next meeting.
- 6.10. Small Width/ Pitch Task Force (PN-5081): Richard Howe presented on 1-mm pitch tapes and less than 8-mm wide carrier tape. A copy of the JEITA presentation made at the May 10, 2005 meeting of IEC TC40/WG36 concerning 4-mm wide by 1-mm pitch tape was shown to the committee. It appears that JEITA will make a formal proposal to IEC TC40/WG36 next year relative to such 4-mm x 1-mm tapes. Ed Mikoski noted that ACH can advise the EIA representative to IEC regarding our support or non-support of proposed IEC standards when balloting occurs. **ACTION ITEMS:** The task force will stay active with Rick Howe as chair. Scott Carter to make contact with JEITA and Curt Maynes to work with his JEITA contact. Ed Mikoski to find out details on how the ACH committee can more fully participate in standards development along official channels with other international standards organizations like IEC and JEITA.
- 6.11. Tape Waviness Task Force (PN-5080): Bill Aldeen reported that the task force (Aldeen, Laven, and Carter) concluded that problems caused by camber have been very few and far between. Tracks in the taping machine tend to help straighten out the camber. The recommendation is to stick with the 250-mm length of tape and a 1-mm tolerance as a standard. There was discussion in great length about waviness and the sealing cover to carrier to peel testing.

ACTION ITEM: Bill Aldeen made a motion to include the work done on this task force to be considered for inclusion into an application guide. Henry Sipes from Samtec seconded the motion and the motion carried unanimously.

7. Presentations

- 7.1. Use of thermoformed trays: A prerecorded presentation by Tyco was shown to the committee, which showed that Tyco is successfully using trays that conform to the proposed Assembly Component Tray standard.
- 7.2. Assembly Component Tray (ACT) Standard (PN-5088, changed from PN-5072): Henry Sipes of Samtec presented the ACT standard to the committee. This standard covers requirements for Assembly Component Trays – ACTs used during automated assembly processes. It was discussed that SI units should be used in the standard. Another discussion point was component orientation instructions, which should remain in Annex A.
- 7.3. ACTION ITEM: Henry Sipes from Samtec made a motion to accept the ACT Standard with a note that the changes in dimensions will be switch to metric first and English second in brackets as an EIA standard and eventually an ANSI Standard. Philip Barnett of EDG seconded the motion and the motion carried unanimously.

8. New Business

- 8.1. Orientation conflict for tantalum chip and multilayer ceramic chip capacitors- Topic covered in correspondence section above.
- 8.2. A possible CARTS representative for ACH was discussed, and it was determined that a formal representative was not necessary but that participation in CARTS would be useful for many ACH committee members. CARTS could also be a marketing opportunity for ACH.
- 8.3. The new project number for revision of EIA 481-C is (PN-5100). The revision will include but not limited to updates related to camber that have been approved by the committee in recent meetings and updates related to polarized component orientation as described previously in these minutes.

9. Old Business

- 9.1. ACH Application Guide Task Force- Henry Sipes volunteered to be the new Chairman. Ed Bishop from Tayloreel and Curt Maynes and colleagues from 3M will also assist.
- 9.2. ACH-2000 submission for Samtec Tray Standard- This submission will be on hold until next meeting depending on the results of the PN-5088 ballot.

10. Marketing and New Member

- 10.1. The committee was urged to continue efforts to get more members for ACH and create a more active invitation program. It was suggested that member companies place electronic ACH brochures on their marketing websites.

10.2. **ACTION ITEM:** Henry Sipes to send Ed Mikoski the electronic version of the brochure and Ed Mikoski who will update it and send it to all the members.

10.3. **ACTION ITEM:** Rick Howe to try and get a guest speaker on RFID tags and their application in tape and reel.

11. Future Meetings

11.1. During the 2005 Fall Engineering Summit – Memphis , TN, Thurs 20 October 2005

12. Adjournment

12.1. A motion to adjourn was seconded and passed unanimously. The meeting adjourned at approximately 4:00pm.

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

Scott Carter
Chairman

Ed Bishop
Acting Secretary