

Attachment No. 1

Minutes of the CE-2.1 Subcommittee on Test Procedures 24 –25 April 2006 Ft. Lauderdale, FL

Subcommittee Chair Carl Fritz welcomed everyone, and said that the meeting would be conducted following the published agenda.

1. Approval of the 17 – 18 October 2005 Minutes

The minutes of the 17 – 18 October 2006 meeting in Memphis, TN was approved. Moved by John Healey and seconded by Ralph Antonelli. The motion was unanimously moved and approved.

2. TEST PROCEDURE PROJECTS (BY PROJECT NUMBER)

A. SP-4942-A, TP-60A, General Methods for Porosity Testing (John Healy)

It was reported that there were 7 approved ballots and no comments received by the ballot expiration date and is ready for EDEC ballot. It was moved by Bob Druckenmiller and seconded by Frank Ruffino to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was unanimously moved and approved.

B. SP-4945-A, TP-29C, Contact Retention (Max Peel)

It was reported that there were 7 approved ballots and no comments received by the ballot expiration date and is ready for EDEC ballot. It was moved by Bob Druckenmiller and seconded by Ralph Antonelli to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was unanimously moved and approved.

C. PN-4943, TP-65, MFG (Max Peel)

It was reported that work is on going.

D. SP-4981, TP-70B, Temperature Rise Versus Current (Max Peel)

It was reported that a rejected ballot with comments was received from Vince Pascucci on 21 March 2006. The comments submitted by Vince Pascucci and the reply from Max peel were reviewed. Carl Fritz reported that the standard has been revised based on the comments received from Vince Pascucci. It was noted that the ballot was issued 3 March 2006 with a ballot expiration date of 3 May 2006, and additional comments may be received and included in the second SP ballot. It was moved by David Bouzek and seconded by Ralph Antonelli to send the revised standard to EIA for a second SP ballot. The results of the second SP ballot will be discussed and acted upon at the fall 2006 meeting. The motion was unanimously moved and approved.

Attachment No. 1

E. SP-5064-A, TP-110, Thermal Cycling (Max Peel)

It was reported that there were 6 approved ballots and one approved ballot with comments received from John Healey by the ballot expiration date. The committee reviewed the comments submitted by John Healey. The standard was revised to reflect the editorial and technical changes during the meeting. It was moved by Bob Druckenmiller and seconded by Ralph Antonelli that the standard be sent out on a short 30-day SP ballot. If there are no rejections or negative comments received on the 30-day ballot the committee also unanimously moved and approved sending the standard to EIA for EDEC ballot, and publish as an ANSI standard.

F. SP-5071, TP-48A, Metallic Coating Thickness (Jeff Toran)**

It was reported that the revised standard was published in March 2006.

G. SP-5083, TP- 5, 7, 8, 24, 25, 27, 37, 40, 44, 79, 85, 87, 88, 93, 94, 97, 98 (J. Toran)**

It was reported that there were 11 approved ballots, one abstention, and one rejection received from Max Peel by the ballot expiration date.

The committee reviewed the rejected ballot submitted by Max Peel. It was moved by Frank Ruffino and seconded by Arnold Offner that test procedures, other than TP-7, 25 and 87, were approved for reaffirmation and submittal to EIA for EDEC ballot, and publication as an ANSI standard.

It was further moved and approved that TP-7 and TP-87 will have new projects numbers initiated to revise the standards based on comments received from Max Peel. It was noted that new project number had already been approved to revise TP-25 at a previous meeting.

These actions were unanimously moved and approved.

Attachment No. 1

H. SP-5084-A, TP-36B, Determination of Gas-Tight characteristics Test for Electrical Connectors and or Contact Systems (Jeff Toran)**

It was reported that there were 7 approved ballots and one abstention received by the ballot expiration date. It was moved by David Bouzek and seconded by Kevin Rickard to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was moved and approved, with Frank Ruffino abstaining.

I. SP-5085, TP-46B, Microsecond Discontinuity Test Procedure for Electrical Connectors, Contacts and Sockets (Jeff Toran)**

It was reported that the standard was published in January 2006.

J. SP-5086, TP-89A, Test Procedures for Electrical Connectors for Space Applications (Jeff Toran)**

It was reported that the standard was published in January 2006.

K. SP-5089, TP-55, Current Cycling (Bob Druckenmiller)**

Bob Druckenmiller reported that he is still working with Max Peel to resolving some technical issues. It was noted that this standard was previously unanimously moved and approved for a second SP ballot at the October 2005 meeting.

L. SP-5103, EIA-364-10D, Fluid Immersion (Carl Fritz)

It was reported that the standard was published in March 2006.

M. SP-5105, EIA-364-23C, Low Level Contact Resistance (Carl Fritz for Contech Research)

It was reported that the standard was sent to EIA and is awaiting ANSI approval.

N. SP-5106, EIA-364-06B, Contact Resistance (Carl Fritz for Contech Research)

It was reported that the standard was published in March 2006.

Attachment No. 1

O. SP-5107, EIA-364-1002, Test Methodology for Assessing the Performance of Compliant Pin Terminations Used as Free Standing Contacts or in Electrical connectors and Sockets (Max Peel)

It was reported that the standard was revised based on rejection received from John Healey. It was moved by Ralph Antonelli and seconded by John Healey to send the revised standard to EIA for a second SP ballot. It was also moved that the revised standard be sent to EIA for EDEC ballot and ANSI publication as an ANSI standard if there are no rejections or negative comments received by the ballot expiration date. Both motions were unanimously approved.

P. SP-5108, TP- 2, 3, 9, 13, 14, 26, 28, 35, 38, 42, 50, 54, 95, 99, 100, 102 and 103 (C. Fritz)**

It was reported that a letter was sent to EIA to reaffirm all listed standards.

Q. SP-5109-A, TP-18B, Visual Inspection (Carl Fritz)**

It was reported that there were 8 approved ballots received and no rejections by the ballot expiration date. It was moved by John Healey and seconded by Ralph Antonelli to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was unanimously moved and approved.

Attachment No. 1

R. SP-5110, TP-15A, Contact Strength (Carl Fritz)**

It was reported that the standard was published in March 2006.

S. SP-5111-A, TP-59A, Low Temperature (Carl Fritz)**

The editorial comments submitted by Vince Pascucci were reviewed and accepted. In addition the committee clarified clause 4.3.6. It was moved by Frank Ruffino and seconded by Bob Druckenmiller to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was unanimously moved and approved.

T. SP-5113, TP-75, Lightning Strike (Carl Fritz)

It was reported that the standard was sent to EIA for reaffirmation, and is presently awaiting publication.

U. SP-5124, TP-56, Resistance to Soldering Heat (Carl Fritz)

It was reported that there were 8 approved ballot received, and 1 abstention. It was moved by Frank Ruffino and seconded by Bob Druckenmiller to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was unanimously moved and approved.

V. SP-5125, TP-28E, Vibration (Carl Fritz)

It was reported that there were 9 approved ballots received and no comments or rejections. It was moved by John Healey and seconded by Ralph Antonelli to approve the standard, send to EIA for EDEC ballot, and publish as an ANSI standard. The motion was unanimously moved and approved.

W. SP-5126, TP-86, Polarizing/coding key overstress (Carl Fritz)

It was reported that the standard was sent to EIA for SP ballot to reaffirm. It is currently awaiting EIA to process the request. It was moved by Frank Ruffino and seconded by Ralph Antonelli to approve the standard, send to EIA for EDEC ballot, and publish as a reaffirmed ANSI standard, if there are no rejections or negative comments received by the ballot expiration date. The motion was unanimously moved and approved.

X. SP-5127, TP-92, Wire bending for insulation displacement contacts (Carl Fritz)

It was reported that the standard was sent to EIA for SP ballot to reaffirm. It is currently awaiting EIA to process the request. It was moved by Bob Druckenmiller and seconded by John Healey to approve the standard, send to EIA for EDEC ballot, and publish as a reaffirmed ANSI standard, if there are no rejections or negative comments received by the ballot expiration date. The motion was unanimously moved and approved.

Attachment No. 1

Y. SP-5134, TP-32D, Thermal Shock (Max Peel)

It was reported that there were 8 approved ballots received, 2 approved ballots with comments from John Healey and Bob Druckenmiller, and 1 rejection with comments from Frank Ruffino. All comments submitted were reviewed and technical and editorial changes made. It was moved by Frank Ruffino and seconded by Bob Druckenmiller to send the standard out on a second SP ballot, and send to EIA for EDEC ballot, and publish as an ANSI standard, if there are no rejections or negative comments received by the ballot expiration date. The motion was unanimously moved and approved.

Z. SP-5136, TP-13C, Mating and Unmating Force Test Procedure for Electrical Connectors and Sockets (Carl Fritz)

The editorial comments submitted by Vince Pascucci were reviewed at the meeting. It was moved by Bob Druckenmiller and seconded by Kevin Rickard to accept the comments submitted by Vince Pascucci and send the standard to EIA for EDEC ballot, and publish as an ANSI standard, if there are no rejections or negative comments received by the ballot expiration date 20 May 2006. The motion was unanimously moved and approved.

** Past due for 5-year review

3. TEST PROCEDURES AWAITING PROJECT NUMBERS (BY TP NUMBER)

A. TP-17B, Temperature Life (Max Peel)

B. TP-25C, Probe damage (Max Peel)

- See Max Peel's letter at end of minutes.

C. TP-31B, Humidity (Max Peel)

D. TP-41C, Cable Flexing (Max Peel)

4. STG REPORT

STG-29-2.1 Performance Criteria (SP-5038-1, EIA-364-1000.01)-John Healy and Max Peel

It was reported that the standard was sent to EIA, and EIA is currently awaiting ANSI approval.

Attachment No. 1

5. OTHER BUSINESS

- A. PN-3787, EIA-364-1000.02 (EIA-364-1001 new designation) Current Rating Verification Procedure (Frank Ruffino and John Healey)

Frank gave an up date on their work in developing a method of determining thermal stability using millivolt drop instead of temperature rise. Frank has agreed to prepare a new draft based on their current work for the next meeting. For reference see papers published at the IICIT conferences in 2003 and 2004, and Holm conference in 2005. The current work will be presented at the September 2006 Holm conference.

- B. EIA-364-105, Altitude, Low Temperature (Bill Upstone)

It was moved and unanimously approved that Max Peel take over the project from Bill Upstone. Max was approved to obtain a project number and send the standard out as letter ballot or SP ballot depending on the complexity of the changes.

- C. Review of MIL-PRF-39012 comments from the military (Ralph Antonelli)

Ralph reported that he his awaiting review of comments from the EIA CE-4.0 committee)

- D. Ionic contamination (John Healey)

It was reported that this project was previously moved and approved to obtain a project number. The committee unanimously moved and approved that the standard be sent out on a letter ballot when it is prepared.

6. NEW BUSINESS

- A. SP-XXXX, EIA-364-1000.01) John Healey

It was moved by John Healey and seconded by Frank Ruffino to obtain a new project number to revise this specification, and change document number to EIA-364-1000 and make any additional changes deem necessary, and send out on SP ballot. The motion was unanimously approved.

- B. TP-7B, Contact axial concentricity (Max Peel)

- See Max Peel's letter at end of minutes.

It was moved and unanimously approved that Max Peel obtain a project number and send the standard out as letter ballot or SP ballot depending on the complexity of the changes.

Attachment No. 1

C. TP-87, Nanosecond event detection (Max Peel)

- See Max Peel's letter at end of minutes.

It was moved and unanimously approved that Max Peel obtain a project number and send the standard out as letter ballot or SP ballot depending on the complexity of the changes.

D. TP-71B, Solder Wicking (Wave Solder Technique) (Bob Druckenmiller)

It was noted that as part of the standard needs to be reviewed to update J-STD references that have been revised as follows:

EIA/IPC J-STD-004 is now EIA/IPC J-STD-004A dated 1 January 2004.

EIA/IPC J-STD-006 is now EIA/IPC J-STD-006B dated 1 January 2006.

It was moved and unanimously approved that Bob Druckenmiller obtain a project number and send the standard out as letter ballot or SP ballot depending on the complexity of the changes. Purpose of the revision is to update the standard to address any effects that lead free solder may have, and any additional issues that may exist.

E. TP-52, Solderability (Max Peel)

It was moved and unanimously approved that Max obtain a project number and send the standard out as letter ballot or SP ballot depending on the complexity of the changes. Purpose of the revision is to update the standard to address any effects that lead free solder may have, and any additional issues that may exist.

F. Addition of revision legend to ALL TP's.

It was unanimously moved and approved to include a Revision History record inside the back cover of every new and revised standard and specifications. As a minimum the location of all technical changes shall be indicated. Depending on the complexity of the change specific details may be included. The revision history block shall take the following form:

Revision History		
Revision letter	Project number	Additions, changes and deletions
	SP-4777	Initial release
B	SP-4981	Technical: Revised 1.2.2, 3.2.2.2, 2.2.3 and table 2. Added 2.1.3.2, 5.9 and 6.4 Deleted 2.2.1: Editorial: 2.1.1, 3.1.2, 3.4.4:
C		

Attachment No. 1

G. Dielectric withstanding voltage.

Tabled for discussion at a future meeting.

H. Standards due for 5-year review, SP-XXXX, TP-01, 21, 22, 39, 43, 45, 53, 66, 83, 90, 101, 106, 107, 108

Test	EIA-364 TP	Rev	Date of last issue	5 Year due date	Years past due	Comments
Acceleration	01	B	May-00	April-05	1	Published May 00
Insulation resistance	21	C	May-00	April-05	1	Published May 00
Simulated life	22	B	March-00	February-05	1	Published Mar 00
Hydrostatic	39	B	August-99	July-04	1	Published Aug 99
Cable clamping (bending moment)	43	B	July-00	June-05	1	Published Jul 00
Firewall flame	45	A	May-00	April-05	1	Published May 00
Nitric acid vapor	53	B	May-00	April-05	1	Published May 00
EMI shielding effectiveness	66	A	May-00	April-05	1	Published May 00
Shell-to-shell and shell-to-bulkhead resistance	83		August-99	July-04	1	Published Aug 99
Crosstalk ratio	90		January-00	December-04	1	Published Jan 00
Attenuation	101		May-00	April-05	1	Published May 00
Standing wave ratio (SWR)	106		May-00	April-05	1	Published May 00
Eye pattern	107		May-00	April-05	1	Published May 00
Impedance, reflection coefficient, return loss, and VSWR	108		July-00	June-05	1	Published Jul 00

NOTE: Document format up to date on all of the above listed standards for 5-year review.

It was moved by John Healey and seconded by Ralph Antonelli to obtain a project number and send the listed standards to EIA for reaffirmation. The motion was unanimously approved.

Carl Fritz, Chairman CE-2.1

Attachment No. 1



67 Mechanic Street, Attleboro, MA 02703
Telephone 508-226-4800 Fax 508-226-6869

Ms. Cecelia Yates
ECA

Re: Ballot for SP5083 (3-16-06)

Dear Cecelia,

Please find attached my ballot on SP5083. I have approved all TP's except for 3. The reasons for disapprovals are as follows:

1) TP 7 (Axial Concentricity)

This TP shows clearly where to take the measurement and the specific area to measure. I have no problem if only pin contacts are to be measured.

There is no guidance for a socket contact and there are requirements to test these contacts as well. There should either be a figure added and/or statements to clarify where these measurements are to be made.

Examples:

1. What is the 'X' dimension or is it necessary for a socket contact?
2. The "chucking area" is in question.
3. The 'Y' dimension should be established (same as the pin contact?).

2) TP 25 (Probe Damage)

I believe this topic is an agenda item for the next meeting.

The issue revolves around the fact that it was harmonized with MIL-STD-1344 and should be a mirror image and they are not.

The problem deals with Paragraph 4.2.2 which specifies depth of the probe is based on the "minimum bore depth".

Attachment No. 1

Re: Ballot for SP5083 - Page Two

MIL-STD-1344 indicates a probe depth as nominal. Basically it means nothing to me in performing the test except that it's not the same and must be clarified to prevent any disputes which may arise. A series of contact spec. slash sheets (/14 39029/x) have min/max bore depths, some have maximums only and others minimum only. Thus, this technical issue should be resolved. There is no history showing that 1344 was an acceptable deviation. When resolved, a note should be added for clarification.

3) TP 87 (Low Nano Second Event Detection)

This document is fine as is but it's extremely technical which I do not object to. Unfortunately, it is starting to be misapplied and clarification notes must be added to prevent this from occurring, which by the way, can significantly impact testing costs. The scope or objective also should be rewritten in this regard as well.

Regards,



Max Peel
Senior Fellow
Contech Research, Inc.

MP:js
cc: File