

Minutes of the Joint ECA Soldering Technology Committee (STC)

Tuesday, April 17, 2007

Holiday Inn Bayside

San Diego, CA

The scope of the Soldering Technology Committee (STC): The STC encompasses soldering practices (soldering iron-mass reflow techniques) and associated soldering materials (solders, pastes and adhesives, and flux/cleaning agents). However, the Committee will focus on solderability test method development for printed through-hole (PTH) and surface mountable components. One of the major functions is to promote commonality and standardization of soldering test methodology within the EIA Sectors.

The meeting was called-to-order at 1:30 PM by STC Committee Chairman, Doug Romm

Name	V	T	Organization	Telephone	E-mail	S07	F06	S06	F05
Attendees									
Doug Romm	M	P	Texas Instruments, Inc	903.868.7388	doug@ti.com	Y	Y	Y	N
Ron Cambron	G	P	Bourns, Inc	480.820.8662	ron.cambron@bourns.com	Y	N	N	N
Wil Cantrell	G	P	Bourns, Inc	951.781.5558	wil.cantrell@bourns.com	Y	N	N	N
Carl Lindquist	M	P	SOC America, Inc	908.218.8899	fuseman@attglobal.net	Y	N	Y	Y
Jayson Young	M	P	KEMET	864.967.6859	jaysonyoung@kemet.com	Y	Y	Y	Y
Liwu Wang	M	P	AEM	858.481.0210	lwang@aem-usa.com	Y	N	N	N
Chris Reynolds	M	P	AVX	843.444.2868	creynolds@avxus.com	Y	Y	Y	N
Michael Cannon	M	P	TDK	847.390.4317	mcannon@tdkca.com	Y	N	Y	N
Michael Griffith	M	P	KOA	814.362.5536	mgriffith@koaspeer.com	Y	N	N	Y
Joe Biernacki	M	P	Stackpole	915.790.2449	jbiernacki@seielect.com	Y	Y	N	N
Mike Lauri	M	U	IBM	845.892.0442	laurim@us.ibm.com	Y	Y	Y	Y
Jack McCullen	G	P	Intel	480.554.5354	Jack.t.mccullen@intel.com	Y	N	Y	N
Mary Carter-Berrios	M	P	Kemet Electronics	864.228.4006	marycarterberrios@kemet.com	Y	Y	Y	Y
Laird Macomber	M	P	Cornell Dubilier	864.843.2277	lmacomber@cde.com	Y	Y	Y	Y
Absent									
Dave Hillman	M	U	Rockwell-Collins	319.295.1615	ddhillma@rockwellcollins.com	N	N	Y	Y
Bill Russell	M	U	Raytheon	972.205.6188	wRussell@raytheon.com	N	Y	N	N
Tom Motoki	M	P	Murata Electronics	770.433.7613	tmotoki@murata.com	N	Y	N	N
Karun Malhotra	G	P	Murata Electronics		kmalhotra@murata.co.jp	N	Y	Y	Y
Chris Cleet	S	G	EIA	703.907.7573	ccleet@eia.org	N	Y	N	N
Len Metzger	M	P	Panasonic	201.348.5244	metzgerl@us.panasonic.com	N	Y	N	Y
Stephen Olster	M	P	Mini-Systems, Inc	508.695.0203	solster@mini-systemsinc.com	N	Y	Y	N
Dave Toomey	M	P	Vishay	207.490.7212	dave.toomey@vishay.com	N	Y	N	Y
Dave Richardson	M	P	Vishay	770.887.2021	dave.richardson@vishay.com	N	Y	Y	Y
Ted Coler	M	P	Vishay	402.563.6417	ted.coler@vishay.com	N	Y	Y	N
Jerry Kolbe	M	P	Murata Electronics	814.238.8437	jkolbe@murata.com	N	Y	N	N
Arnold Offner	M	P	Phoenix Circuit	717.948.3469	aoffner@phoenixcon.com	N	N	Y	N
Jack Crawford	G	G	IPC	847.597.2893	crawja@ipc.org	N	N	Y	N
Kory Schroeder	M	P	Stackpole Electronics	919.875.2495	kschroeder@seielect.com	N	N	N	Y
Ray Lehman	M	P	Vishay	402.563.6332	ray.lehman@vishay.com	N	N	N	Y
Nonvoting Members Present									
Ed Mikoski	M	G	EIA	703.907.7518	emikoski@ecaus.org	N	Y	Y	Y

* PI = Participant identification: V = voting status; M = member; G = guest; S = staff; T = participant type; P = producer; U = user; G = general participant

1) Introductions and Roster modifications

2) Old business

2.1) Sept meeting minutes approval – The committee approved the minutes from the September 2006 STC meeting in Reno, Nevada.

3) New business

3.1 Revision to IPC/EIA J-STD-002B

3.1.1 J-STD-002C Status

- The committee reviewed STC ballot responses of J-STD-002C. All committee members agreed that they had received adequate response to any comments provided by STC.
- Committee members then reviewed recent inputs from JEDEC members. In particular the committee agreed with comments (2) and (3) from Paul Melville of Philips. Paul has requested that 3.4.1.1 clearly state "Solderability testing shall be performed per the appropriate test in Table 3.3". The committee also agreed with the comment that the statement from section 1.3.2 be added to the Force Measurement Tests heading in Table 3.3, to indicate "These methods are included for evaluation purposes only".
- The committee was informed that a rebalot is in process to be published now and will have a 45-day limit once sent out.
- Ultimately JEDEC will drop B102 when J-STD-002C is completed and released.

3.2 Possible replacements for steam pre-conditioning

- Committee members have agreed that an area for future work is the replacement of steam pre-conditioning. Investigation of industry data and other pre-condition methods in use will be needed. A DOE has been designed. The DOE was reviewed at the recent IPC 5-23a/b committee meeting in Los Angeles. The STC reviewed the DOE files and summary from Hillman and Russell. Some of the key inputs were:
- The "pathfinder" is meant to preevaluate the overall DOE to make sure we do not commit the time and resources to do the entire DOE without knowing of any possible problems. It is a reduced set of tests using only 2 component types.
- The "pathfinder" will confirm that we are not overstressing or understressing the parts. If the pathfinder goes well, then we will kick off the full DOE activity at the IPC Fall meeting, last week of September in Chicago. The large DOE should be completed in mid-2008 timeframe.
- In the DOE the set of conditions of 8 hrs, 72C/85RH is included. This set of conditions was developed by the J-STD-003 committee to replace steam conditioning for circuit boards. Some members of IPC 5-23a/b wanted this set of conditions to be included in the DOE.

3.3 Gauge R&R for wetting balance test

The wetting balance test method is currently listed in ANSI/J-STD-002 under the section "Tests without Established Accept/Reject Criterion". Dave Hillman has previously indicated that the IPC committee discussed the options of either validating or removing the wetting balance method as an accepted method. This is an area for future work.

4 Next meeting

The next meeting is scheduled to be held in conjunction with the ECA Fall 2007 ECA Engineering Summit. ECA Engineering Summit will be held at the Holiday Inn Riverwalk in San Antonio, TX week of September 24-27, 2007.

5 Adjournment

The Committee moved, seconded, and unanimously agreed to adjourn at 5:00PM. This meeting was conducted in accordance with the EIA legal guidelines and the EIA manual of organization and procedure.

Doug Romm

STC Chairperson