

Minutes of the ECA Soldering Technology Committee (STC)

Tuesday, September 28, 2010

Sheraton Austin Hotel

Austin, Texas

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 agnets). 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.

This meeting was called to order at 1:30 p.m. by STC Committee Chairman, Doug Romm

Name	PI		Organization	Telephone	E-mail	F10	S10	F09	F08
	V	T							
Attendees									
Balliette, Bill	V	P	Faradox	512-638-8967	bballiette@faradox.com	Y	N	N	N
Gisseler, Bill	M	P	TDK	847-390-4442	wgisseler@tdkca.com	Y	Y	N	N
Glenn, Darin	M	P	Vishay-Dale	402-563-6573	darin.glenn@vishay.com	Y	Y	Y	N
Le, Phong	V	P	Faradox	214-770-9727	ple@faradox.com	Y	N	N	N
Macomber, Laird	M	P	Cornell Dubilier	864-843-2277	lmacomber@cde.com	Y	Y	Y	Y
McHargue, Lanney	M	P	Murata	770-319-5159	lmchargue@murata.com	Y	N	Y	Y
Lauri, Mike	M	U	IBM	845-892-0442	laurim@us.ibm.com	Y	Y	Y	Y
Romm, Doug	M	P	Texas Instruments	903 870-0973	doug@ti.com	Y	Y	Y	Y
Russell, Bill	M	U	Raytheon	972-205-6188	wrussell@raytheon.com	Y	Y	Y	N
Absent									
Anderson, Brian	V	P	KOA Speer	814-362-5536	banderson@koaspeer.com	N	N	Y	N
Biernacki, Joe	M	P	Stackpole	915-790-2449	j.biernacki@seielect.com	N	Y	Y	N
Cannon, Mike	M	P	TDK	847-390-4317	mcannon@tdkca.com	N	N	N	Y
Carter Berrios, Mary	M	P	KEMET Corporation	864-901-0157	marycarterberrios@kemet.com	N	Y	N	Y
Carter, Scott	G	P	Tek Pak	630-406-0560	scarter@tekpak.com	N	N	N	Y
Coler, Ted	M	P	Vishay	402-563-6417	Ted.coler@vishay.com	N	N	Y	N
Connell, Jim	M	P	Vishay	610-969-8240	jim.connell@vishay.com	N	N	N	Y
Cannon, Mike	M	P	TDK	847-390-4317	mcannon@tdkca.com	N	N	N	Y
Cambron, Ron	G	P	Bourns, Inc.	480-820-8662	Ron.cambron@bourns.com	N	N	N	N
Cantrell, Wil	G	P	Bourns, Inc.	951-781-5558	Wil.cantrell@bourns.com	N	N	N	N
Cleet, Chris	S	G	EIA	703-907-7573	cleet@eia.org	N	N	N	N
Crawford, Jack	G	G	IPC	847-597-2893	crawja@ipc.org	N	N	N	N
Griffith, Mike	M	P	KOA Speer	814-362-5536	mgriffith@koaspeer.com	N	N	N	N
Hillman, Dave	M	U	Rockwell-Collins	319-295-1615	ddhillma@rockwellcollins.com	N	N	N	N
Kolbe, Jerry	M	P	Murata	814-238-8437	jkolbe@murata.com	N	N	N	N
Kummerl, Steven	M	P	Texas Instruments, Inc.	214-480-1509	s-kummerl2@ti.com	N	N	N	N
Lindquist, Carl	M	P	--	908-218-8899	clindquist@attglobal.net	N	Y	Y	N
Masek, Ivan	G	P	Novotechnik U.S.	508-485-2244	imasek@novotechnik.com	N	N	Y	N
Masui, Jim	M	P	Murata	770-436-1300	jmasui@murata.com	N	N	N	N
McCullen, Jack	G	P	Intel	480-554-5354	Jack.t.mccullen@intel.com	N	N	N	N
Malhotra, Karun	G	P	Murata		kmalhotra@murata.co.jp	N	N	N	N
Metzger, Len	M	P	Panasonic	201-348-5244	metzgerl@us.panasonic.com	N	N	N	N
Motoki, Tom	M	P	Murata	770-433-7613	tmotoki@murata.com	N	N	N	N
Offner, Arnold	M	P	Phoenix Contact	717-948-3469	aoffner@phoenixcon.com	N	N	N	N
Olster, Stephen	M	P	Mini-Systems, Inc.	508-695-0203	bolster@mini-systemsinc.com	N	N	N	N
Piscitelli, Brian	M	P	KOA Speer Electronics	814-362-5536	bpiscitelli@koaspeer.com	N	N	Y	N
Reynolds, Chris	M	P	AVX	843-444-2868	creynolds@avx.com	N	N	N	N
Richardson, Dave	M	P	Vishay	770-887-2021	Dave.richardson@vishay.com	N	N	N	Y
Toomey, Dave	M	P	Vishay	207-490-7212	Dave.toomey@vishay.com	N	N	N	N
Wang, Liwu	M	P	AEM	858-481-0210	lwang@aem-usa.com	N	N	N	N
Young, Jayson	M	P	KEMET Corporation	864-967-6859	jaysonyoung@kemet.com	N	Y	Y	Y
Nonvoting Members Present									
Mikoski, Ed	S	G	ECA	703-907-8023		Y	Y	Y	Y

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

1. Introductions and Roster Modifications

2. Old Business

- 2.1. Spring 2010 meeting minutes approval – The committee approved the minutes from the Spring 2010 STC meeting.

3. New Business

3.1. IPC / EIA J-STD-002C

3.1.1. Bill Russell reviewed results of the DOE.

3.1.2. Purpose of the DOE was:

3.1.2.1. To evaluate an alternative conditioning methodology that is more applicable to finishes we encounter today

3.1.2.2. Evaluate the effect of dry aging on component solderability performance

3.1.2.3. Assemble the data needed to make an informed decision

3.1.3. Results of the DOE can be seen in ppt summary.

3.1.4. Page 3 shows the full designed experiment, with all groups listed from original experiment. Groups included in Confirmation run are shown on page 5.

3.1.5. Page 6 shows observations.

3.1.5.1. Solder temperature: Results at 245 and 255C are similar and both are significantly better than 215C.

3.1.5.2. Aging conditions:

3.1.5.2.1. Air aging for two years has the smallest influence on component solderability results of any aging method

3.1.5.2.2. Solderability results of steam aged components are the most erratic compared to other aging methods, and thus most difficult to interpret

3.1.5.2.3. Recommend 4 hours of dry aging because results are similar to 8 hours and both are less variable than steam

3.1.5.3. Overall message: Solder temperature is far and away the most influential with aging method somewhat influential.

3.2. J-STD-002D

3.2.1. The committee reviewed a (MS Word) draft of J-STD-002D which was provided by Dave Hillman of Rockwell-Collins. Mr. Hillman completed an initial update to J-STD-002C with changes based upon results of the DOE. The committee understood that this is not in ballot stage yet but is simply a “straw man” version for committee discussion.

3.3. Gauge R&R for Wetting Balance test

3.3.1. The wetting balance test method is currently listed in ANSI/J-STD-002 under the section “Tests without Established Accept / Reject Criterion”. The STC has agreed to undertake evaluation of either validating or removing the wetting balance test as an accepted method. Plans and timing for this future work is tabled until after J-STD-002 ballot is further along.

4. Next Meeting

The next meeting is scheduled to be held in conjunction with the ECA Spring 2010 ECA Engineering Summit. The ECA Engineering Summit is proposed (not finalized) to be held in Orlando, FL.

5. Adjournment

The committee moved, seconded, and unanimously agreed to adjourn at approximately 3:30pm. The meeting was conducted in accordance with the EIA legal guidelines and the EIA manual of organization and procedure.

Respectfully submitted:

Doug Romm

Chairman, STC