

Minutes of the Joint ECA Soldering Technology Committee (STC)

Tuesday, April 27, 2010

Hyatt Grand Cypress

Orlando, Florida

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	V	T	Organization	Telephone	E-mail	S10	F09	F08	S08
Attendees										
Carter Berrios, Mary	M	P		KEMET Corporation	864-901-0157	marycarterberrios@kemet.com	Y	N	Y	Y
Biernacki, Joe	M	P		Stackpole	915-790-2449	j.biernacki@seiselect.com	Y	Y	N	Y
Gisseler, Bill	M	P		TDK	847-390-4442	wgisseler@tdkta.com	Y	N	N	N
Glenn, Darin	M	P		Vishay-Dale	402-563-6573	darin.glenn@vishay.com	Y	Y	N	N
Lindquist, Carl	M	P		--	908-218-8899	clindquist@attglobal.net	Y	Y	N	Y
Lauri, Mike	M	U		IBM	845-892-0442	laurim@us.ibm.com	Y	Y	Y	Y
Macomber, Laird	M	P		Cornell Dubilier	864-843-2277	lmacomber@cde.com	Y	Y	Y	Y
Romm, Doug	M	P		Texas Instruments	903 870-0973	doug@ti.com	Y	Y	Y	N
Russell, Bill	M	U		Raytheon	972-205-6188	wrussell@raytheon.com	Y	Y	N	N
Young, Jayson	M	P		KEMET Corporation	864-967-6859	jaysonyoung@kemet.com	Y	Y	Y	Y
Absent										
Anderson, Brian	V			KOA Speer	814-362-5536	banderson@koaspeer.com	N	Y	N	N
Cannon, Mike	M	P		TDK	847-390-4317	mcannon@tdkta.com	N	N	Y	N
Carter, Scott	G	P		Tek Pak	630-406-0560	carter@tekpak.com	N	N	Y	N
Coler, Ted	M	P		Vishay	402-563-6417	Ted.coler@vishay.com	N	Y	N	N
Connell, Jim	M	P		Vishay	610-969-8240	jim.connell@vishay.com	N	N	Y	N
Cannon, Mike	M	P		TDK	847-390-4317	mcannon@tdkta.com	N	N	Y	N
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
Masek, Ivan	G	P		Novotechnik U.S.	508-485-2244	imasek@novotechnik.com	N	Y	N	N
McHargue, Lanney	M	P		Murata	770- 319-5159	lmchargue@murata.com	N	Y	Y	Y
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	Y
Olster, Stephen	M	P		Mini-Systems, Inc.	508-695-0203	solster@mini-systemsinc.com	N	N	N	N
Piscitelli, Brian	M	P		KOA Speer Electronics	814-362-5536	bpiscitelli@koaspeer.com	N	Y	N	Y
Reynolds, Chris	M	P		AVX	843-444-2868	creynolds@avx.com	N	N	N	Y
Richardson, Dave	M	P		Vishay	770-887-2021	Dave.richardson@vishay.com	N	N	Y	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
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. Fall 2009 meeting minutes approval – The committee approved the minutes from the Fall 2009 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 to date can be seen in ppt summary.

3.1.4. Page 3 shows the full designed experiment, with all groups listed from original experiment. Confirmation run to be reviewed now include 1,2,3,9,10.

3.1.5. Page 7 shows observations.

3.1.5.1. Solder temperature: Component performance improves as solder temperature increases. Solder performance is markedly lower at 215C

3.1.5.2. Aging conditions: Air aging for 2 years is the most benign. Steam aging is the most severe. Dry aging is for 4 or 8 hours. Severity falls between air and steam. Results after aging under these two conditions are often indistinguishable. Variance of results using dry aging for 4 hours is similar to 8 hours

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

3.2. Gauge R&R for Wetting Balance test

3.2.1. 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 2010.

4. Next Meeting

The next meeting is scheduled to be held in conjunction with the ECA Fall 2010 ECA Engineering Summit. The ECA Engineering Summit will be held in Austin, TX.

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