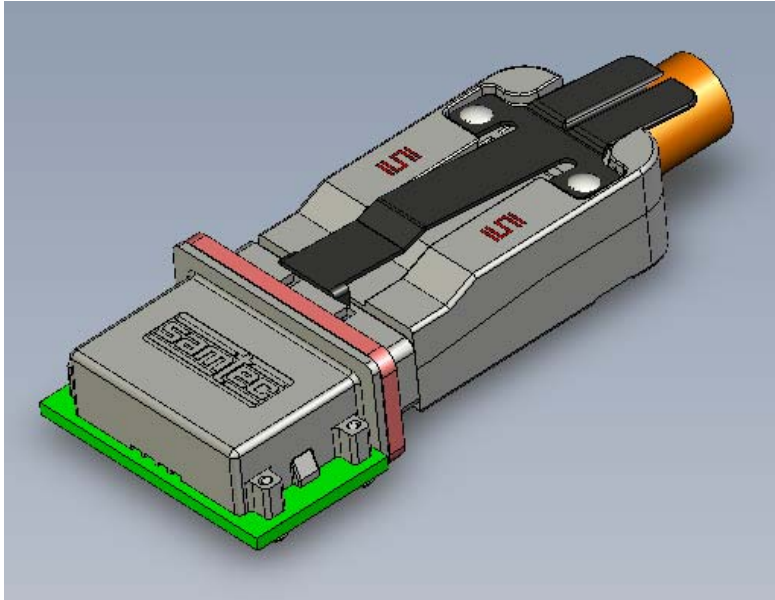




Project Number:		Tracking Code: TC0841--2030_ReportRev3				
Requested by: Joe Smallwood		Date: 1/29/2009		Product Rev: 2		
Part #: EPLSP-XXX-1000/ ERI8-031-S-D-RA			Lot #: N/A		Tech: Troy Cook	Eng: Troy Cook
Part description: EPLSP					Qty to test: 40	
Test Start: 10/08/2008		Test Completed: 12/23/2008				



SUPPLEMENTAL TEST REPORT

CABLE PULL/FLEX TESTING

PART DESCRIPTION

EPLSP-XXX-1000

Mated with

ERI8-031-S-D-RA

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to ISO 10012-1 and ANSI/NCSL 2540-1, as applicable.

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SCOPE

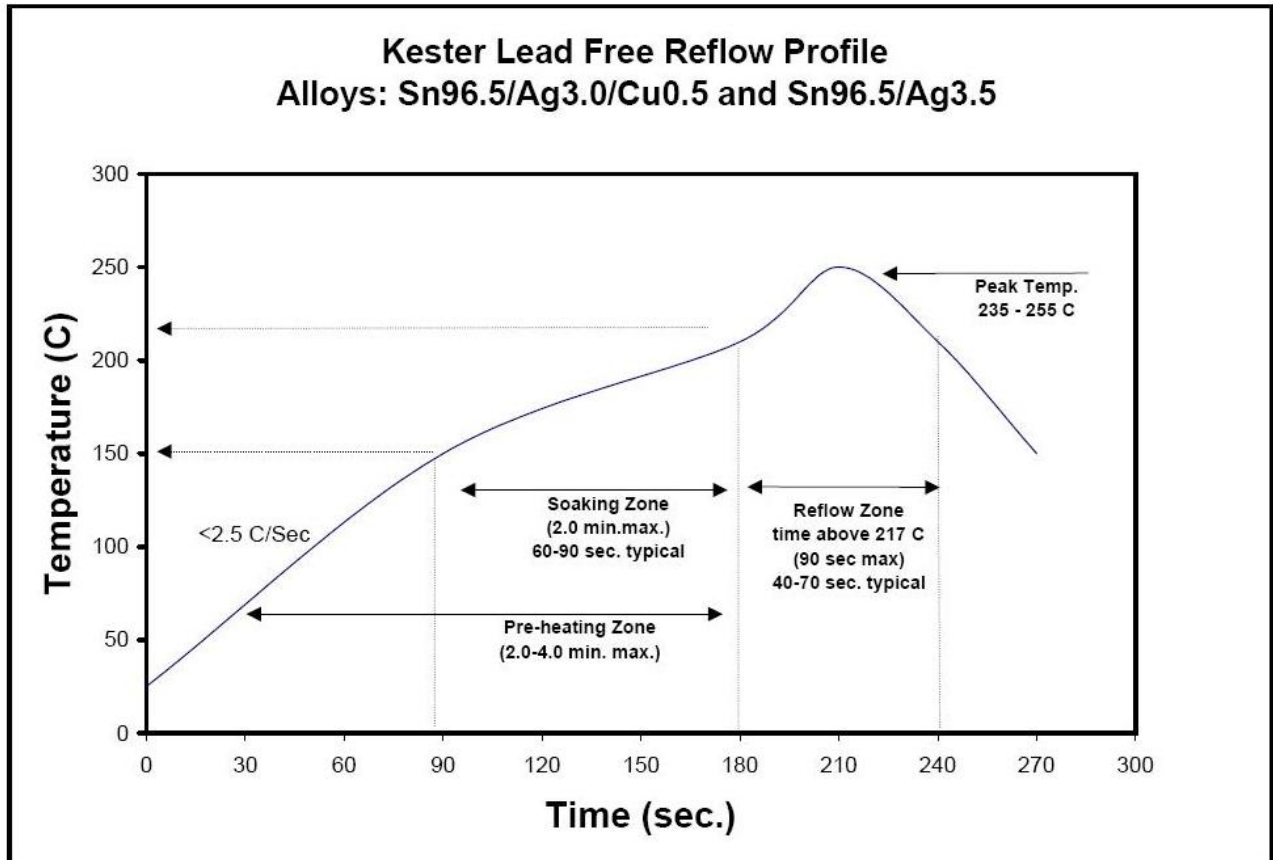
- To perform the following tests:
- 1) Pull Test (5pcs) – Test latch to failure
 - 2) Pull Test (5pcs) – Test cable to failure (0deg)
 - 3) Pull Test (5pcs) – 90deg
 - 4) Flex Test (5pcs) – 90deg
 - 5) Flex Test (5pcs) – 35deg

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

- 1) All materials were manufactured in accordance with the applicable product specification.
- 2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
- 3) After soldering, the parts to be used for LLCR and DWV/IR testing were cleaned according to TLWI-0001.
- 4) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
- 5) The automated procedure is used with aqueous compatible soldering materials.
- 6) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
- 7) Any additional preparation will be noted in the individual test sequences.
- 8) Solder Information: Lead Free
- 9) Re-Flow Time/Temp: See accompanying profile.
- 10) Samtec Test PCBs used: PCB-100865-TST-XX

TYPICAL OVEN PROFILE (Soldering Parts to Test Boards)

FLOWCHARTS**Connector Pull**

	5 Pieces	5 Pieces	5 Pieces
TEST STEP	GROUP 1	GROUP 2	
	Right Angle SIG 0°	Right Angle SIG 90°	Right Angle Latch Pull Force
01	Pull test, Continuity	Pull test, Continuity	Pull to Failure

Secure both cables in the center
Monitor continuity and pull
record forces when continuity fails.

Resistance, SIG Continuity

	5 Pieces	5 Pieces
TEST STEP	GROUP 1	GROUP 1A
	DV End 90°	DV End 35°
	SIG	SIG
01	Resistance	Resistance
02	1000 Cycles	1000 Cycles
03	Resistance	Resistance
04	Data Review	Data Review
05	2000 Cycles	2000 Cycles
06	Resistance	Resistance
07	Data Review	Data Review
08	3000 Cycles	3000 Cycles
09	Resistance	Resistance
10	Data Review	Data Review
11	4000 Cycles	4000 Cycles
12	Resistance	Resistance
13	Data Review	Data Review
14	5000 Cycles	5000 Cycles
15	Resistance	Resistance

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

CONNECTOR PULL:

- 1) Secure cable near center and pull on connector
 - a. At 90°, right angle to cable



Fig. 1

(Typical set-up, actual part depicted.)

90° Connector pull, notice the electrical continuity hook-up wires.

b. At 0°, in-line with cable



Fig. 2

(Typical set-up, actual part depicted.)

0° Connector pull, notice the electrical continuity hook-up wires.

c. At 0° Latch Pull, in-line with cable



Fig. 3
(Typical set-up, actual part depicted.)
Latch Pull to failure.

CABLE DURABILITY:

- 1) Oscillate and monitor electrical continuity for open circuit indication.
 - a. $\pm 35^\circ$ Pendulum Mode, **bend up to 5,000 cycles with 8 oz. load on cable end.**

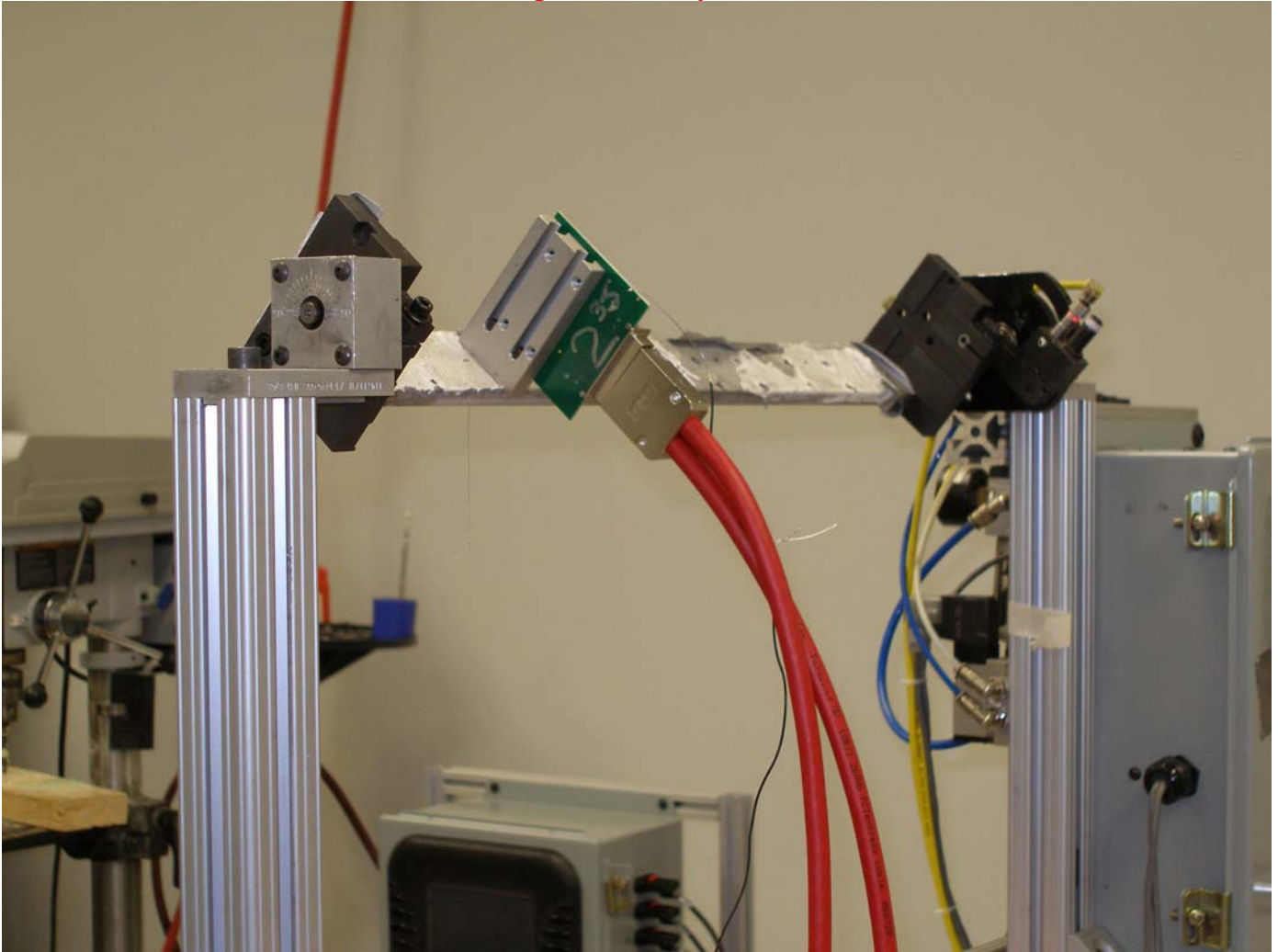


Fig. 4
(Typical set-up, actual part depicted.)

b. $\pm 90^\circ$ Flex Mode, **bend up to 5,000 cycles with 8 oz. load on cable end.**

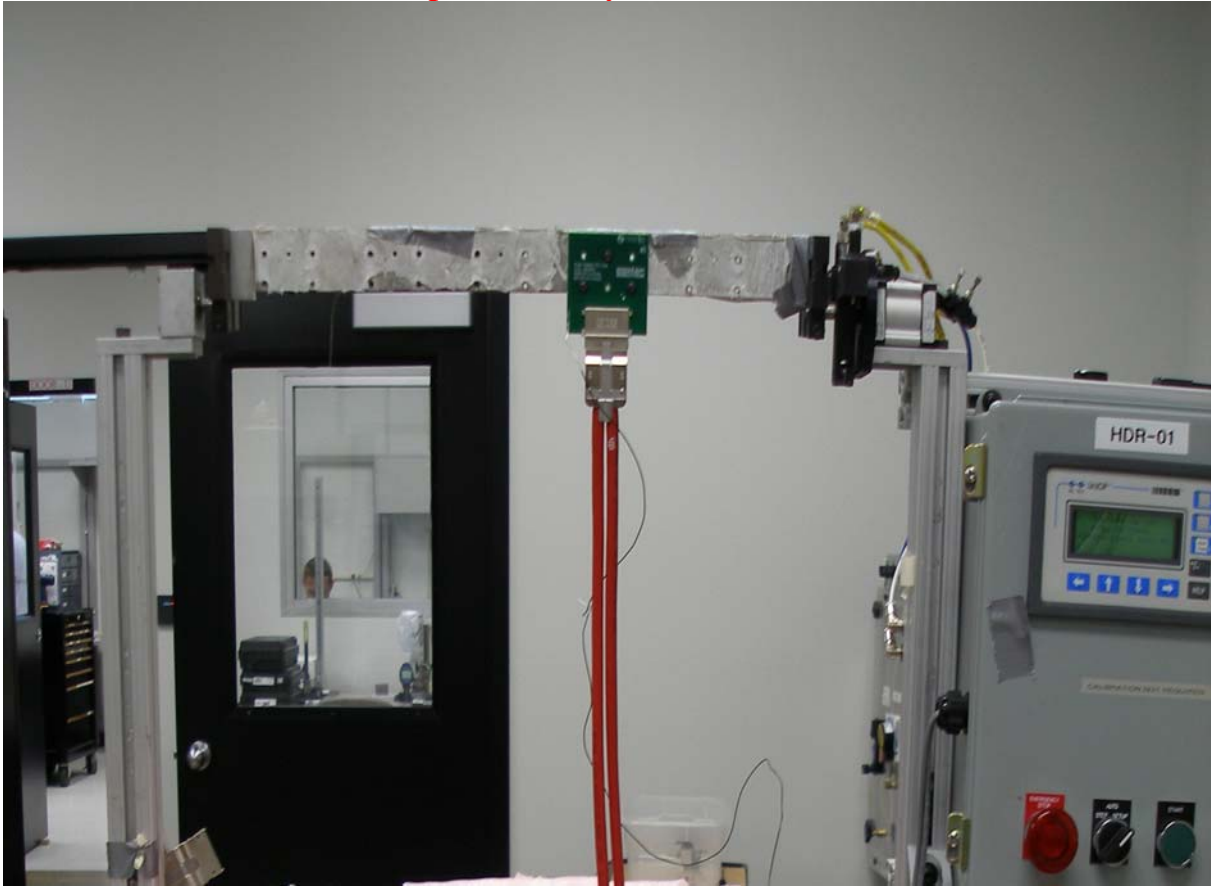


Fig. 5
(Typical set-up, actual part depicted.)

RESULTS

Cable Pull

- 0° ----- 80.5 lbs min
- 90° ----- 102.5 lbs min

Latch Pull

- 0° ----- 60.11 lbs min

Cable Flex 5,000 Cycles

- $\pm 35^{\circ}$ Pendulum Mode ----- No Electrical Failures
- $\pm 90^{\circ}$ Flex Mode
 - Min ----- 963 Cycles before Failure
 - Max ----- 1,915 Cycles before Failure

DATA SUMMARIES

	0 Deg.	90 Deg.
Cable Pull	<u>Force (Lbs)</u>	<u>Force (Lbs)</u>
Minimum	80.50	102.50
Maximum	122.00	115.50
Average	101.5	107.8

	Latch Pull
Latch Pull	<u>Force (Lbs)</u>
Minimum	60.11
Maximum	99.85
Average	81.9

35 Deg. Flex	Resistance, Ohms					
	Initial	After 1000	After 2000	After 3000	After 4000	After 5000
Avg	9.2040	9.2240	9.3300	9.5560	9.7740	9.3460
Min	8.9800	9.1300	8.7300	9.1900	9.0900	9.0800
Max	9.5700	9.3600	10.2800	10.2800	11.7400	9.6400
St. Dev.	0.2468	0.0937	0.5710	0.4274	1.1178	0.2073
Count	5	5	5	5	5	5

90 Deg. Flex	Resistance, Ohms	
	Initial	After 1000
Avg	9.3580	9.5550
Min	8.8000	9.0500
Max	10.8000	10.9000
St. Dev.	0.8151	0.8980
Count	5	4

DATA

Cable Pull	0 Deg.		90 Deg.
Sample#	Maximum Force (Lbs)	Sample#	Maximum Force (Lbs)
1	122.00	1	108.00
2	109.00	2	115.50
3	106.50	3	105.00
4	89.50	4	102.50
5	80.50		

	Latch Pull
Sample#	Maximum Force (Lbs)
1	88.04
2	81.69
3	79.60
4	99.85
5	60.11

35 Deg. Flex	Resistance, mOhms					
Cable	Initial	After 1000 Cycles	After 2000 Cycles	After 3000 Cycles	After 4000 Cycles	After 5000 Cycles
1	9.6	9.2	9.2	9.4	9.6	9.3
2	9.3	9.3	10.3	10.3	11.7	9.4
3	9.2	9.2	8.7	9.6	9.1	9.6
4	9.0	9.4	9.2	9.2	9.2	9.1
5	9.0	9.1	9.2	9.3	9.3	9.3

90 Deg. Flex	Resistance, mOhms		
Cable	Initial	After 1000 Cycles	After 2000 Cycles
1	9.1	9.2	Failed @ 1,915 Cycles
2	9.1	9.1	Failed @ 1,380 Cycles
3	8.8	9.1	Failed @ 1,875 Cycles
4	9.0	Failed @ 963 Cycles	N/A
5	10.8	10.9	Failed @ 1,251 Cycles

EQUIPMENT AND CALIBRATION SCHEDULES**Equipment #:** TCT-01**Description:** Test Stand**Manufacturer:** Chatillon**Model:** TCD-1000**Serial #:** 05 23 00 02**Accuracy:** Speed Accuracy: +/-5% of max speed; Displacement: +/- .5% or +/- .005, whichever is greater.

... Last Cal: 5/24/07, Next Cal: 5/31/08

Equipment #: LC-1000N (icell)-1**Description:** 1000 N icell load cell for Dillon Test stand**Manufacturer:** Mecmesin (Dillon/Quantrol)**Model:** icell**Serial #:** 06-0052-12**Accuracy:** .10 % of capacity

... Last Cal: 08/06/2008, Next Cal: 08/06/2009

Equipment #: HDR - 01**Description:** HDR Flex Tester**Manufacturer:** Samtec Inc.**Model:** AT-1440-000**Serial #:** AT-1440-000**Accuracy:** N/A

... Last Cal: No Calibration Required, Next Cal:

Equipment #: MO-01**Description:** Micro-Ohmmeter**Manufacturer:** Keithley**Model:** 580**Serial #:** 0772740**Accuracy:** See Manual

... Last Cal: 06/22/07, Next Cal: 06/22/08

Equipment #:**Description:****Manufacturer:****Model:****Serial #:****Accuracy:**

... Last Cal: , Next Cal: