AUGUST 28, 2008

TEST REPORT #208383-3 REV.1.1

MIXED FLOWING GAS
TESTING

CONNECTOR SERIES

CLP-130-02-S-D-A
FTSH-130-02-S-DV-A

SAMTEC, INC.

APPROVED BY: DOMINIC ARPINO
PROGRAM MANAGER
CONTECH RESEARCH, INC.

1478 - 01
Test Laboratory
1478 - 02

Contech Research
An Independent Test and Research Laboratory

REVISION HISTORY

DATE	REV. NO.	DESCRIPTION	ENG.
8/28/2008	1.0	Initial Issue	DA
9/02/2008	1.1	Editorial changes on the cover page.	DA

CERTIFICATION

This is to certify that the evaluation described herein was designed and executed by personnel of Contech Research, Inc. It was performed with the concurrence of Samtec, Inc., of New Albany, IN who was the test sponsor.

All equipment and measuring instruments used during testing were calibrated and traceable to NIST according to ISO 10012-1 and ANSI/NCSL Z540-1 and MIL-STD-45662 as applicable.

All data, raw and summarized, analysis and conclusions presented herein are the property of the test sponsor. No copy of this report, except in full, shall be forwarded to any agency, customer, etc., without the written approval of the test sponsor and Contech Research.

Dominic Arpino
Program Manager
Contech Research, Inc.

DA:cf

SCOPE

To perform Mixed Flowing Gas testing on CLP/FTSH connector series as manufactured and submitted by the test sponsor Samtec, Inc.

APPLICABLE DOCUMENTS

1. Unless otherwise specified, the following documents of issue in effect at the time of testing performed form a part of this report to the extent as specified herein. The requirements of sub-tier specifications and/or standards apply only when specifically referenced in this report.

2. Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

1. The following test samples were submitted by the test sponsor, Samtec, Inc., for the evaluation to be performed by Contech Research, Inc.

TABLE 1

Connector Series	Samtec Reference
a) CLP/FTSH	TC0824-1790

2. Test samples were supplied assembled and terminated to test boards by the test sponsor.

3. The test samples were tested in their 'as received' condition.

4. Spacers were assembled to each test sample to maintain stability between the mated pair.

5. Unless otherwise specified in the test procedures used, no further preparation was used.

TEST SELECTION

1. See Test Plan Flow Diagram, Figure #1, for test sequences used.

TEST SELECTION –continued

2. Test set ups and/or procedures which are standard or common are not detailed or documented herein provided they are certified as being performed in accordance with the applicable (industry or military) test methods, standards and/or drawings as specified in the detail specification.

SAMPLE CODING

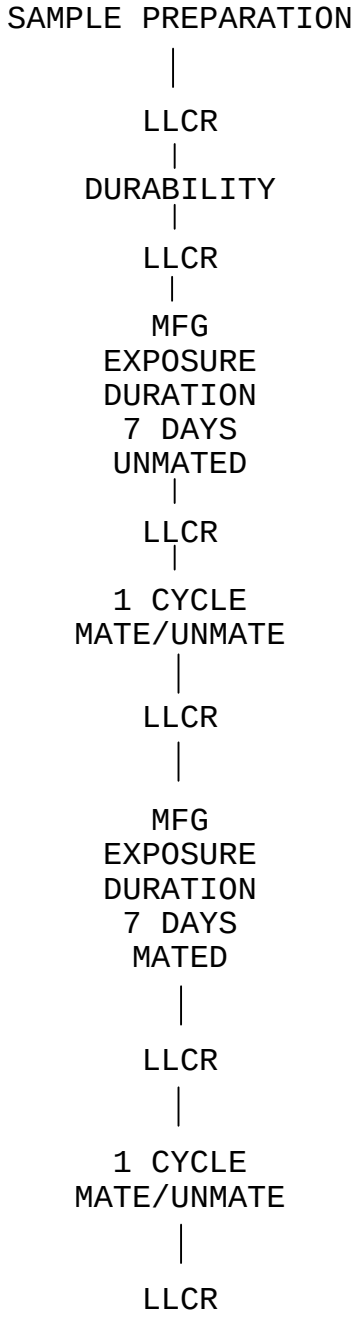
1. All samples were coded. Mated test samples remained with each other throughout the test group/sequences for which they were designated. Coding was performed in a manner which remained legible for the test duration.

2. The test samples were coded in the following manner:

Series	**File ID#'s**
CLP/FTSH	20838317 to 20838324

FIGURE #1

TEST PLAN FLOW DIAGRAM



Group A

DATA SUMMARY

TEST	REQUIREMENT	RESULT
GROUP A		
LLCR		
GP-3 CLP/FTSH	RECORD	9.0 mΩ MAX.
DURABILITY		
GP-3 CLP/FTSH	NO DAMAGE	PASSED
LLCR		
GP-3 CLP/FTSH	+10.0 mΩ MAX.CHG.	+2.3 mΩ MAX.CHG.
MFG –UNMATED		
GP-3 CLP/FTSH	NO DAMAGE	CORROSION
LLCR		
GP-3 CLP/FTSH	+10.0 mΩ MAX.CHG.	+6.9 mΩ MAX.CHG.
1 CYCLE		
GP-3 CLP/FTSH	NO DAMAGE	PASSED
LLCR		
GP-3 CLP/FTSH	+10.0 mΩ MAX.CHG.	+1.3 mΩ MAX.CHG.
MFG – MATED		
GP-3 CLP/FTSH	NO DAMAGE	PASSED
LLCR		
GP 3 CLP/FTSH	+10.0 mΩ MAX.CHG.	+1.3 mΩ MAX.CHG.
1 CYCLE		
GP 3 CLP/FTSH	NO DAMAGE	PASSED
LLCR		
GP 3 CLP/FTSH	+10.0 mΩ MAX.CHG.	+2.6 mΩ MAX.CHG.

EQUIPMENT LIST

ID#	Next Cal	Last Cal	Equipment Name	Manufacturer	Model #	Serial #	Accuracy	Freq.Cal
102	1/30/2009	1/30/2008	Data Acquisition Unit	Hewlett Packard	3421A	2338A02027	±. 5 %Of Indicated	12mon
208			Analyzer	Columbia Scientific	SA285E	JC006	See Manual	N/A
236	4/8/2009	4/8/2008	Micro-Ohm Meter	Keithley Instr.	580	462173	See Cal Cert	12mon
295	10/16/2008	10/16/2007	Micro-Ohm Meter	Keithley Instr.	580	480781	See Cal Cert	12 mon.
340			X-Y Table	NE Affiliated Tech.	XY-6060	N/A	N/A	N/A
436			Gas Regulator	Liquid Carboinc Co.	702-S-3	392838	N/A	N/A
443			Gas Regulator Valve	Liquid Carbonic Co.	DRK-2-48	40197	See Manual	N/A
510			Regulator	Liquid Carbonic	SGS 160C	M2 42366	N/A	N/A
525			Gas Regulator	Superior Co.	5113A	350218	See Owners Manual	N/A
543	12/21/2008	12/21/2007	Analytical Balance	Ohaus Co.	AP250D	MO9198	± .4mg	12mon
563			MFG Control Pan	Contech Research	N/A	N/A	N/A	Ea Test
601			Computer	A.M.I.	P111-450	082714	N/A	N/A
673	8/12/2009	8/12/2008	Microohm Meter	Keithley Co.	580	0681911	See Cal Cert	12 mon.
681			Computer	ARC Co.	P166	N/A	N/A	N/A
1015	11/14/2008	11/14/2007	Temp. Humid. Transmitter	General Eastern	850-232-5	00278	± 2%RH	6mon
1027			Computer	ARC Co.	Pent.133	026871	N/A	N/A
1105			Elect.Liquid Level Control	Cole Parmer	7187	15239	N/A	N/A
1371			Drill Press Stand	Sears	335	25926	N/A	N/A
1381			Air Dryer	Balston	75-20	A03391	See Manual	N/A
1540			MFG Chamber	Contech Research	5 CU. FT	N/A	N/A	
1546	1/2/2009	1/2/2008	Microohm meter	Keithley	580	0803454	See Cert	12mon
1571			Chlorine Analyzer	IMS CO.	Air Sentury	1265AN	See Manual	EA Test

TEST RESULTS

GROUP A

PROJECT NO.: 208383-3 SPECIFICATION: EIA-364

PART NO.: See page 5 PART DESCRIPTION: See page 5

SAMPLE SIZE: 8 connectors TECHNICIAN: BE, RJC, DH, BB

START DATE: 7/22/08 COMPLETE DATE: 7/23/08

ROOM AMBIENT: 22°C RELATIVE HUMIDITY: 43%

EQUIPMENT ID#: 236, 295, 601, 673, 681, 1546

LOW LEVEL CIRCUIT RESISTANCE (LLCR)

PURPOSE:

1. To evaluate contact resistance characteristics of the contact systems under conditions where applied voltages and currents do not alter the physical contact interface and will detect oxides and films which degrade electrical stability. It is also sensitive to and may detect the presence of fretting corrosion induced by mechanical or thermal environments as well as any significant loss of contact pressure.

2. This attribute was monitored after each preconditioning and/or test exposure in order to determine said stability of the contact systems as they progress through the applicable test sequences.

3. The electrical stability of the system is determined by comparing the initial resistance value to that observed after a given test exposure. The difference is the change in resistance occurring whose magnitude establishes the stability of the interface being evaluated.

PROCEDURE:

1. The test was performed in accordance with EIA 364, Test Procedure 23 with the following conditions:

2. Test Conditions:

   a) Test Current : 100 milliamps maximum
   b) Open Circuit Voltage : 20 millivolts
   c) No. of Positions Tested : 25 per test sample

PROCEDURE: -continued

3. The points of application are shown in Figure #2.

REQUIREMENTS:

Low level circuit resistance shall be measured and recorded.

RESULTS:

1. The following is a summary of the data observed:

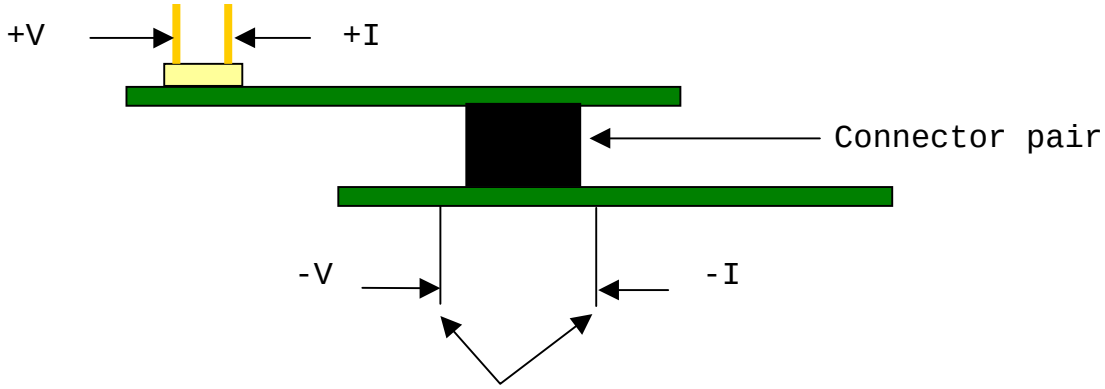
	LOW LEVEL CIRCUIT RESISTANCE (Milliohms)		
Sample ID#	Avg.	Max.	Min.
GP 3 CLP/FTSH			
3-17	7.0	7.7	6.6
3-18	7.4	8.2	6.1
3-19	7.4	8.2	6.3
3-20	7.6	8.9	6.0
3-21	7.1	9.0	5.6
3-22	7.3	7.9	6.1
3-23	7.3	8.0	6.2
3-24	7.3	8.1	6.5

2. See the following data files for individual data points.

	File Numbers
Group 3	20838317 through 20838324

FIGURE #2

TYPICAL LLCR SET UP



Buss wires are soldered to the 2 PTH's

PROJECT NO.: 208383-3 SPECIFICATION: EIA-364

PART NO.: See page 5 PART DESCRIPTION: See page 5

SAMPLE SIZE: 8 connectors TECHNICIAN: DH, BE

START DATE: 7/23/08 COMPLETE DATE: 7/24/08

ROOM AMBIENT: 25°C RELATIVE HUMIDITY: 45%

EQUIPMENT ID#: 236, 340, 601, 1371

DURABILITY

PURPOSE:

1. This is a preconditioning sequence which is used to induce the type of wear on the contacting surfaces which may occur under normal service conditions. The connectors are mated and unmated a predetermined number of cycles. Upon completion, the units being evaluated are exposed to the environments as specified to assess any impact on electrical stability resulting from wear or other wear dependent phenomenon.

2. This type or preconditioning sequence is also used to mechanically stress the connector system as would normally occur in actual service. This sequence in conjunction with other tests is used to determine if a significant loss of contact pressure occurs from said stresses which in turn, may result in an unstable electrical condition to exist.

PROCEDURE:

1. The test was performed in accordance with EIA 364, Test Procedure 09.

2. Test Conditions:

   a) No. of Cycles : 25X
   b) Rate : 1.0 inch per minute

3. The samples were cycled using an X Y Table and a drill press stand.

PROCEDURE: -continued

4. All subsequent variable testing was performed in accordance with the procedures previously indicated.

REQUIREMENTS:

1. There shall be no evidence of physical damage to the test samples so tested.

2. The change in low level circuit resistance shall not exceed +10.0 milliohms.

RESULTS:

1. There was no evidence of physical damage to the test samples as tested.

2. The following is a summary of the data observed:

	CHANGE IN LOW LEVEL CIRCUIT RESISTANCE (Milliohms)	
Sample ID# GP 3 CLP/FTSH	Avg. Change	Max. Change
3-17	+0.2	+0.5
3-18	-0.1	+1.0
3-19	+0.0	+2.3
3-20	-0.3	+0.9
3-21	+0.1	+1.4
3-22	+0.2	+1.5
3-23	+0.1	+1.2
3-24	-0.1	+0.6

3. See the following data files for individual data points.

	File Numbers
Group 3	20838317 through 20838324

PROJECT NO.: 208383-3	SPECIFICATION: EIA-364-65
PART NO.: See page 5	PART DESCRIPTION: See page 5
SAMPLE SIZE: 8 connectors	TECHNICIAN: DH
START DATE: 7/25/08	COMPLETE DATE: 8/11/08
ROOM AMBIENT: 23°C	RELATIVE HUMIDITY: 48%
EQUIPMENT ID#: 102, 208, 436, 443, 510, 525, 543, 563, 673, 681, 1015, 1027, 1105, 1381, 1540, 1571	

MIXED FLOWING GAS

PURPOSE:

1. To determine the impact on electrical stability of contact interfaces when the test samples are exposed to a mixed flowing gas environment. Said environment is based on field data simulating typical, severe, non-benign environments. Said exposure is indicative of expected behavior in the field.

2. Mixed flowing gas tests (MFG) are environmental test procedures whose primary purpose is to evaluate product performance under simulated storage or operating (field) conditions. For parts involving plated contact surfaces, such tests are also used to measure the effect of plating degradation (due to the environment) on the electrical and durability properties of a contact or connector system. The specific test conditions are usually chosen so as to simulate, in the test laboratory, the effects of certain representative field environments or environmental severity levels on standard metallic surfaces.

PROCEDURE:

1. The test environment was performed in accordance with EIA 364, Test Procedure 65 with the following conditions.

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PROCEDURE: -continued

2. Environmental Conditions:

a)	Temperature	: 30°C ± 1°C
b)	Relative Humidity	: 70% ± 2%
c)	$C1_2$	: 10 ± 3 ppb
d)	NO_2	: 200 ± 50 ppb
e)	H_2S	: 10 ± 5 ppb
f)	SO_2	: 100 ± 20 ppb
g)	Exposure Time	: 14 days
h)	Mating Conditions	: First 7 days - unmated
		: Second 7 days -mated

3. The test chamber was allowed to stabilize at the specified conditions indicated.

4. After stabilization, the test samples and control coupons were placed in the chamber such that they were no closer than 2.0" from each other and/or the chamber walls.

5. The test samples were handled in a manner so as not to disturb the contact interface.

6. After placement of the test samples in the chamber, it was allowed to re-stabilize and adjusted as required to maintain the specified concentrations and conditions.

7. The test chamber was monitored periodically during the exposure period to assure the environmental conditions as specified were maintained.

8. All subsequent variable testing was performed in accordance with the procedures previously indicated.

REQUIREMENTS:

1. There shall be no evidence of damage or corrosion to the test samples as exposed which will cause mechanical or electrical malfunction of the said samples.

2. The change in low level circuit resistance shall not exceed +10.0 milliohms.

RESULTS:

1. Some evidence of corrosion was observed on the contact interface.

-continued on next page.

RESULTS: -continued

2. The following is a summary of the data observed following the 7 days unmated portion of the exposure:

	MAXIMUM CHANGE IN LOW LEVEL CIRCUIT RESISTANCE (Milliohms)			
Sample ID#	Avg. Chg.	Max. Chg.	Avg. Chg.	Max. Chg.
GR 3 CLP/FTSH	@ 7 Days		1 Cycle	
3-17	+1.0	+2.9	+0.4	+1.3
3-18	+0.7	+6.9	+0.1	+1.1
3-19	-0.1	+1.3	+0.0	+1.3
3-20	-0.5	+0.5	-0.4	+0.6
3-21	+0.1	+1.5	-0.2	+1.1
3-22	-0.1	+0.6	+0.1	+1.3
3-23	-0.1	+0.6	+0.0	+0.8
3-24	+0.0	+1.8	-0.1	+0.7

3. The following is a summary of the data observed following the 7 additional days mated portion of the exposure.

	MAXIMUM CHANGE IN LOW LEVEL CIRCUIT RESISTANCE (Milliohms)			
Sample ID#	Avg. Chg.	Max. Chg.	Avg. Chg.	Max. Chg.
GR 3 CLP/FTSH	@ 14 Days		1 Cycle	
3-17	+0.2	+0.5	+0.5	+2.6
3-18	-0.1	+1.0	+0.2	+2.5
3-19	-0.3	+1.1	+0.0	+1.1
3-20	-0.5	+0.9	-0.4	+1.1
3-21	-0.1	+1.2	+0.0	+1.3
3-22	+0.1	+1.3	+0.1	+1.2
3-23	+0.0	+0.9	+0.0	+0.7
3-24	-0.2	+0.6	-0.1	+0.7

-continued on next page.

RESULTS: -continued

4. See the following data files for individual data points.

	File Numbers
Group 3	20838317 through 20838324

5. Five copper coupons were placed in the chamber. Upon removal said coupons were evaluated via weight gain technique with the following results:

	WEIGHT GAIN ($\mu gm/cm^2/Day$)	
Coupon No.	Unmated	Mated
1	14	12+
2	13	14+
3	13+	13
4	15	15
5	14	14

Requirement: 12 to 16 $\mu gm/cm^2/Day$

LLCR DATA FILES

FILE NUMBERS

Group 3

20838317
20838318
20838319
20838320
20838321
20838322
20838323
20838324

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-17
Product:	CLP / FTSH				File No:	20838317
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	45	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	6.6	0.4	0.5	0.3	0.2	0.4
2	6.8	0.1	0.3	0.1	0.2	0.5
3	7.1	-0.1	0.6	0.4	0.3	0.7
4	7.1	0.0	2.1	0.1	0.1	0.3
5	6.9	0.3	0.5	0.4	0.3	0.4
6	7.0	0.1	0.4	0.3	0.2	0.3
7	7.1	0.4	0.5	0.5	0.4	0.6
8	6.8	0.1	1.6	0.5	0.2	0.9
9	7.1	0.4	0.9	0.4	0.3	0.7
10	6.9	0.4	1.7	0.5	0.2	0.4
11	7.1	0.2	1.0	0.5	0.2	0.6
12	6.8	0.3	1.3	0.6	0.3	0.5
13	7.0	0.5	2.5	0.6	0.4	0.6
14	6.7	0.2	0.3	0.3	0.2	0.3
15	6.9	0.3	0.6	0.5	0.3	0.5
16	6.7	0.1	0.9	0.4	0.3	0.6
17	7.0	0.3	0.5	0.5	0.2	0.4
18	6.7	0.0	0.5	0.3	0.3	0.7
19	6.9	0.3	2.9	0.5	0.5	2.6
20	6.6	0.5	2.5	1.3	0.1	0.4
21	7.1	0.2	0.4	0.4	0.2	0.3
22	7.2	0.3	1.9	0.6	0.3	0.2
23	7.1	0.4	1.0	0.5	0.4	0.4
24	7.3	0.1	0.9	0.1	0.0	0.3
25	7.7	-0.4	-0.3	-0.5	-0.5	-0.6
MAX	7.7	0.5	2.9	1.3	0.5	2.6
MIN	6.6	-0.4	-0.3	-0.5	-0.5	-0.6
AVG	7.0	0.2	1.0	0.4	0.2	0.5
STD	0.2	0.2	0.8	0.3	0.2	0.5
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-18
Product:	CLP / FTSH				File No:	20838318
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	8.1	-0.9	-0.3	-0.7	-0.9	-0.7
2	7.4	0.1	1.5	0.1	0.0	0.1
3	7.2	0.0	0.0	0.0	-0.1	-0.1
4	7.2	0.0	0.2	0.1	-0.1	0.0
5	7.6	-0.2	0.6	-0.2	-0.3	0.0
6	6.8	0.2	1.7	0.9	0.2	0.4
7	8.2	-0.8	-0.3	-0.3	-0.7	-0.6
8	7.5	-0.2	-0.2	0.0	-0.3	0.0
9	7.7	-0.1	0.0	0.1	-0.1	0.1
10	7.4	-0.1	0.1	0.0	-0.1	-0.1
11	8.0	-0.7	-0.2	-0.3	-0.6	-0.3
12	7.1	0.1	-0.5	0.1	0.1	0.4
13	8.1	-0.8	-0.5	-0.6	-0.8	-0.6
14	7.4	0.1	0.2	0.2	0.1	0.1
15	7.0	0.2	6.9	1.1	0.2	2.5
16	7.7	-0.3	2.0	-0.1	-0.5	-0.2
17	6.2	0.9	1.7	1.1	0.8	1.3
18	7.3	0.0	0.7	0.1	-0.1	0.2
19	7.1	-0.1	1.2	0.4	-0.1	2.1
20	6.1	1.0	1.4	1.1	1.0	1.1
21	7.6	-0.2	0.1	0.0	-0.2	0.1
22	7.6	-0.3	2.4	0.4	-0.3	0.0
23	7.6	-0.4	-0.4	-0.3	-0.4	-0.2
24	7.9	-0.1	0.0	-0.1	-0.2	-0.1
25	7.8	0.0	0.2	-0.2	-0.3	-0.2
MAX	8.2	1.0	6.9	1.1	1.0	2.5
MIN	6.1	-0.9	-0.5	-0.7	-0.9	-0.7
AVG	7.4	-0.1	0.7	0.1	-0.1	0.2
STD	0.5	0.4	1.5	0.5	0.4	0.8
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-19
Product:	CLP / FTSH				File No:	20838319
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	7.4	-0.4	-0.7	-0.4	-0.6	-0.5
2	7.6	-0.2	-0.2	0.0	-0.3	0.4
3	6.3	2.3	0.5	1.3	1.1	1.1
4	8.2	-0.7	-0.9	-0.9	-1.1	-1.0
5	8.1	-0.7	-0.4	-0.9	-1.0	-0.8
6	7.4	-0.2	-0.1	0.3	-0.1	0.0
7	7.5	-0.2	-0.1	-0.2	-0.4	-0.1
8	7.4	0.0	0.1	0.1	-0.1	0.1
9	7.4	-0.1	0.0	-0.2	-0.4	-0.3
10	7.4	0.2	0.3	0.2	0.0	0.3
11	7.3	-0.1	-0.2	0.1	-0.3	0.0
12	6.6	0.7	0.3	0.8	0.8	1.0
13	7.3	0.0	-0.1	-0.1	-0.3	-0.1
14	7.3	0.2	-0.5	1.0	-0.2	0.0
15	7.3	-0.1	-0.2	0.2	-0.3	-0.1
16	7.9	-0.2	-0.4	-0.3	-0.6	-0.4
17	7.1	0.0	-0.3	0.3	-0.2	0.1
18	7.7	-0.1	-0.2	0.0	-0.4	-0.1
19	7.3	-0.1	0.0	0.2	-0.1	0.2
20	7.4	0.0	0.1	0.0	-0.2	0.0
21	7.5	-0.1	0.1	0.1	-0.1	0.1
22	7.8	-0.2	-0.2	-0.2	-0.4	-0.2
23	7.7	-0.1	0.3	-0.2	-0.5	-0.3
24	8.0	0.0	1.3	-0.4	-0.8	-0.3
25	7.5	0.1	0.2	0.0	-0.2	-0.1
MAX	8.2	2.3	1.3	1.3	1.1	1.1
MIN	6.3	-0.7	-0.9	-0.9	-1.1	-1.0
AVG	7.4	0.0	-0.1	0.0	-0.3	0.0
STD	0.4	0.6	0.4	0.5	0.5	0.5
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-20
Product:	CLP / FTSH				File No:	20838320
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	6.0	0.9	-0.1	0.5	0.9	1.1
2	6.9	0.6	0.3	0.2	0.2	0.2
3	7.1	-0.1	-0.4	-0.1	-0.1	-0.1
4	7.5	-0.7	-0.6	-0.5	-0.4	-0.5
5	6.5	0.5	0.5	0.5	0.5	0.5
6	8.0	-0.4	-0.7	-0.4	-0.5	-0.5
7	7.6	-0.3	-0.5	-0.1	-0.5	-0.3
8	7.7	-0.5	-0.5	-0.4	-0.5	-0.4
9	7.4	-0.2	-0.5	-0.4	-0.5	-0.5
10	7.5	-0.4	-0.3	-0.3	-0.4	-0.2
11	8.9	-1.3	-2.0	-1.9	-2.1	-1.9
12	6.7	0.6	0.0	0.6	0.5	0.5
13	7.1	0.0	-0.1	0.1	-0.1	0.2
14	8.6	-1.2	-1.7	-1.5	-1.8	-1.7
15	7.6	-0.4	-0.5	-0.4	-0.6	-0.6
16	8.8	-0.2	-1.1	-1.9	-2.0	-2.0
17	7.6	-0.4	-0.5	-0.2	-0.5	-0.2
18	7.9	-0.6	-0.9	-0.9	-0.9	-0.7
19	7.7	-0.5	-0.4	-0.3	-0.5	-0.3
20	7.3	-0.1	-0.4	-0.4	-0.4	-0.3
21	7.7	-0.4	-0.5	-0.4	-0.7	-0.5
22	7.3	-0.2	-0.2	-0.1	-0.2	-0.1
23	7.3	-0.3	-0.4	-0.2	-0.4	-0.2
24	8.2	-0.4	-0.2	-0.6	-0.4	-0.4
25	8.6	-0.5	-0.9	-0.8	-1.0	-1.0
MAX	8.9	0.9	0.5	0.6	0.9	1.1
MIN	6.0	-1.3	-2.0	-1.9	-2.1	-2.0
AVG	7.6	-0.3	-0.5	-0.4	-0.5	-0.4
STD	0.7	0.5	0.5	0.6	0.7	0.7
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-21
Product:	CLP / FTSH				File No:	20838321
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	8.1	-0.7	-0.9	-1.1	-1.1	-1.1
2	7.3	0.0	-0.2	-0.2	-0.2	-0.3
3	6.3	0.8	1.0	0.4	0.7	0.8
4	7.1	-0.1	-0.1	-0.3	-0.3	-0.1
5	7.3	0.2	-0.2	-0.4	-0.2	-0.2
6	6.7	-0.1	-0.1	-0.1	-0.1	-0.1
7	6.9	0.2	0.0	0.2	0.1	0.4
8	6.6	0.3	0.5	0.4	0.2	-0.2
9	6.7	0.7	0.8	0.6	0.5	0.6
10	6.6	0.5	0.3	0.3	0.2	0.2
11	7.3	-0.1	-0.2	-0.3	-0.3	0.1
12	5.6	1.4	0.8	1.1	1.2	1.2
13	6.3	0.9	1.5	0.6	0.7	0.9
14	6.8	0.6	0.1	-0.2	0.1	0.3
15	7.3	-0.2	0.1	-0.4	-0.6	-0.2
16	6.3	0.2	0.9	-0.4	0.6	0.7
17	6.9	0.0	0.2	-0.6	0.0	0.2
18	7.4	-0.7	-0.1	-0.4	-0.5	-0.3
19	7.4	-0.4	-0.4	-1.1	-0.4	-0.5
20	6.3	0.2	0.5	-0.1	0.8	1.3
21	7.5	0.0	-0.2	-0.3	-0.4	-0.3
22	7.2	0.2	0.5	-0.1	-0.3	-0.2
23	7.6	0.0	0.0	-0.5	-0.5	-0.4
24	7.8	-0.2	-0.5	-0.4	-0.5	-0.5
25	9.0	-0.4	-0.8	-1.0	-1.2	-1.2
MAX	9.0	1.4	1.5	1.1	1.2	1.3
MIN	5.6	-0.7	-0.9	-1.1	-1.2	-1.2
AVG	7.1	0.1	0.1	-0.2	-0.1	0.0
STD	0.7	0.5	0.6	0.5	0.6	0.6
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-22
Product:	CLP / FTSH				File No:	20838322
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	7.6	-0.1	-0.4	-0.2	-0.2	-0.1
2	7.1	0.1	0.1	0.1	0.0	0.1
3	6.5	0.5	0.6	0.7	0.4	0.6
4	7.5	0.2	0.0	-0.1	-0.2	-0.1
5	7.1	0.3	0.3	0.3	0.2	0.3
6	7.5	-0.1	-0.1	-0.2	-0.2	-0.2
7	7.7	-0.2	-0.4	-0.4	-0.5	-0.3
8	7.7	-0.1	0.0	0.0	-0.1	0.0
9	7.4	-0.1	-0.2	-0.3	-0.2	-0.2
10	7.6	-0.2	0.0	0.0	-0.1	-0.1
11	7.3	-0.1	0.0	0.0	-0.1	-0.2
12	6.8	0.8	0.3	0.7	0.7	0.7
13	6.2	1.1	0.0	1.2	1.1	1.2
14	6.1	1.5	0.2	1.3	1.3	1.2
15	6.5	0.9	-0.2	1.0	1.0	1.0
16	7.6	-0.1	-0.1	-0.1	-0.1	0.0
17	7.6	0.0	-0.2	-0.2	-0.2	0.0
18	7.7	-0.2	0.0	-0.3	-0.3	-0.4
19	7.3	0.0	-0.1	0.2	0.1	0.3
20	7.4	-0.1	-0.2	-0.2	-0.3	-0.3
21	7.2	0.0	0.0	0.1	0.3	0.0
22	7.3	0.0	0.0	-0.1	-0.2	-0.2
23	7.9	-0.1	-0.5	-0.5	-0.6	-0.4
24	7.7	-0.1	-0.3	-0.3	-0.3	-0.4
25	7.0	-0.1	0.0	-0.1	0.0	-0.2
MAX	7.9	1.5	0.6	1.3	1.3	1.2
MIN	6.1	-0.2	-0.5	-0.5	-0.6	-0.4
AVG	7.3	0.2	-0.1	0.1	0.1	0.1
STD	0.5	0.5	0.2	0.5	0.5	0.5
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-23
Product:	CLP / FTSH				File No:	20838323
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	6.4	0.4	0.4	0.7	0.5	0.4
2	7.5	-0.1	-0.6	0.0	-0.2	-0.1
3	7.6	-0.1	-0.5	-0.3	-0.2	-0.4
4	7.3	0.1	-0.3	0.1	-0.1	0.0
5	7.2	-0.1	-0.2	0.0	-0.2	-0.2
6	8.0	0.0	-0.7	-0.6	-0.8	-0.7
7	7.8	0.1	0.0	-0.2	-0.2	-0.3
8	7.4	-0.1	0.1	0.1	0.1	0.2
9	7.3	-0.1	0.0	0.0	-0.1	-0.1
10	7.5	-0.1	-0.2	-0.3	-0.2	0.1
11	6.5	0.9	0.6	0.8	0.7	0.6
12	6.8	0.9	0.3	0.6	0.5	0.7
13	6.2	1.2	-0.1	-0.1	0.9	0.5
14	7.0	0.7	0.4	-0.4	0.3	0.0
15	7.3	0.2	0.2	-0.3	0.0	0.2
16	7.7	-0.2	-0.5	-0.2	-0.3	0.2
17	7.4	-0.1	-0.1	0.0	0.0	0.0
18	7.5	-0.1	-0.1	-0.1	0.1	0.0
19	7.6	0.0	-0.1	-0.1	-0.2	-0.1
20	7.2	-0.1	0.2	0.2	-0.1	0.0
21	7.4	0.1	0.0	0.2	0.1	0.1
22	7.5	-0.1	0.4	-0.1	-0.1	0.0
23	7.5	-0.1	-0.2	-0.1	-0.2	-0.3
24	7.7	-0.3	-0.4	-0.5	-0.8	-0.7
25	7.8	-0.3	-0.3	-0.4	-0.4	-0.4
MAX	8.0	1.2	0.6	0.8	0.9	0.7
MIN	6.2	-0.3	-0.7	-0.6	-0.8	-0.7
AVG	7.3	0.1	-0.1	0.0	0.0	0.0
STD	0.4	0.4	0.3	0.3	0.4	0.4
Open	0	0.0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207

		Low Level Contact Resistance				
Project:	208383				Spec:	EIA364, TP23
Customer:	Samtec				Subgroup:	3-24
Product:	CLP / FTSH				File No:	20838324
Description:	Unidentified					
Open circuit voltage:		20mV			Current:	100mA
			Delta Values			
			Units: Milliohms			
Temp ºC	22	22	23	23	23	22
R.H. %	44	44	48	47	47	45
Date:	23Jul08	23Jul08	01Aug08	04Aug08	12Aug08	14Aug08
Pos. ID	Initial	Durability	MFG	Unmate/Mate	MFG	Unmate/Mate
		25X	7 Days	1X	14 Days	1X
1	7.7	-0.2	-0.2	-0.3	-0.3	-0.2
2	6.9	0.0	0.1	-0.1	-0.1	0.0
3	7.3	-0.2	-0.1	-0.1	-0.1	-0.1
4	7.4	-0.1	-0.1	-0.3	-0.2	-0.1
5	8.1	-0.3	-0.1	-0.5	-0.5	-0.4
6	7.4	-0.1	-0.3	-0.1	-0.4	-0.4
7	7.6	-0.3	-0.4	-0.4	-0.5	-0.5
8	7.3	-0.2	-0.2	-0.3	-0.3	-0.3
9	7.5	-0.1	0.0	0.0	-0.2	-0.3
10	6.9	0.1	-0.3	-0.1	0.1	0.2
11	7.1	0.3	0.3	0.1	0.2	0.3
12	6.6	0.3	0.3	0.4	0.4	0.5
13	7.0	0.3	1.8	0.4	0.1	0.3
14	6.5	0.6	0.2	0.7	0.6	0.7
15	7.4	-0.2	-0.2	-0.2	-0.2	0.0
16	7.3	0.0	-0.5	-0.3	-0.3	-0.2
17	7.4	-0.1	-0.1	-0.2	-0.2	-0.1
18	7.5	-0.2	-0.2	-0.1	-0.3	-0.1
19	7.5	-0.2	-0.3	-0.4	-0.4	-0.4
20	7.2	-0.1	-0.3	-0.3	-0.4	-0.3
21	7.2	-0.1	0.2	-0.1	-0.2	0.2
22	7.1	-0.1	0.1	0.1	0.0	0.1
23	7.7	-0.2	-0.2	-0.2	-0.3	-0.2
24	7.2	-0.1	0.3	0.2	0.0	0.2
25	7.8	-0.4	-0.7	-0.9	-1.0	-1.0
MAX	8.1	0.6	1.8	0.7	0.6	0.7
MIN	6.5	-0.4	-0.7	-0.9	-1.0	-1.0
AVG	7.3	-0.1	0.0	-0.1	-0.2	-0.1
STD	0.4	0.2	0.5	0.3	0.3	0.4
Open	0	0	0	0	0	0
Tech	DH	RJC	DH	DH	DH	BB
Equip ID	244	236	673	673	681	1032
	681	601	681	681	1546	207