

APRIL 28, 2009

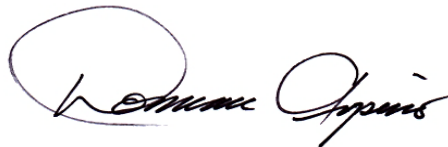
TEST REPORT #209107-1 REV. 1.2

MIXED FLOWING GAS
TESTING

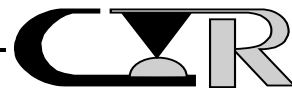
CONNECTOR PART NUMBERS

ERF8-050-05.0-X-DV
ERM8-050-05.0-X-DV-DS

SAMTEC, INC.



APPROVED BY: DOMINIC ARPINO
PROJECT ENGINEERING MANAGER
CONTECH RESEARCH, INC.
ATTLEBORO, MA

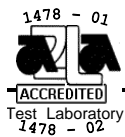


Contech Research

An Independent Test and Research Laboratory

REVISION HISTORY

DATE	REV. NO.	DESCRIPTION	ENG.
4/28/2009	1.0	Initial Issue	DA
4/29/2009	1.1	Added the connector part numbers to the cover page.	DA
4/15/2011	1.2	Added LLCR data sheet file #20910714, see page 37.	DA

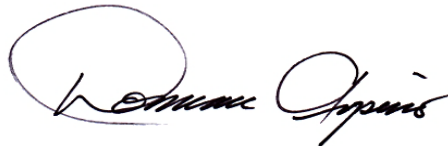


CERTIFICATION

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
Project Engineering Manager
Contech Research, Inc.
Attleboro, MA

DA:cf



SCOPE

To perform Mixed Flowing Gas testing on ERF8/ERM8 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.

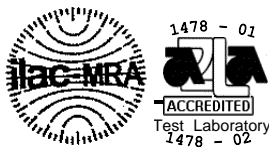
TABLE 1

<u>Connector Series</u>	<u>Samtec Reference</u>	<u>QTY</u>
a) ERF8/ERM8 (30Au)	TC0906-2254	8
b) ERF8/ERM8 (50Au)	TC0906-2224	8

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:

<u>Series</u>	<u>File ID#'s</u>
ERF8/ERM8 (30Au)	20910702
	20910704
	20910705
	20910706
	20910707
	20910708
	20910775
	20910776
	ERF8/ERM8 (50Au)
20910710A	
20910711	
20910712	
20910713	
20910714	
20910715	
20910716	



FIGURE #1

TEST PLAN FLOW DIAGRAM

SAMPLE PREPARATION

|

LLCR

|

DURABILITY

|

LLCR

|

MFG

EXPOSURE

DURATION

7 DAYS

UNMATED

|

LLCR

|

1 CYCLE

MATE/UNMATE

|

LLCR

|

MFG

EXPOSURE

DURATION

7 DAYS

MATED

|

LLCR

|

1 CYCLE

MATE/UNMATE

|

LLCR

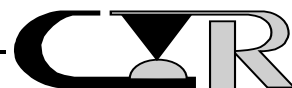
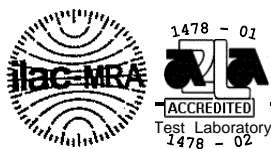
GROUP A



DATA SUMMARY

<u>TEST</u>	<u>REQUIREMENT</u>	<u>RESULT</u>
<u>GROUP A</u>		
LLCR		
ERF8/ERM8 (30Au)	RECORD	20.2 mΩ MAX.
ERF8/ERM8 (50Au)	RECORD	18.9 mΩ MAX.
DURABILITY		
ERF8/ERM8 (30Au)	NO DAMAGE	PASSED
ERF8/ERM8 (50Au)	NO DAMAGE	PASSED
LLCR		
ERF8/ERM8 (30Au)	+10.0 mΩ MAX.CHG.	+1.3 mΩ MAX.CHG.
ERF8/ERM8 (50Au)	+10.0 mΩ MAX.CHG.	+1.4 mΩ MAX.CHG.
MFG -UNMATED		
ERF8/ERM8 (30Au)	NO DAMAGE	CORROSION
ERF8/ERM8 (50Au)	NO DAMAGE	CORROSION
LLCR		
ERF8/ERM8 (30Au)	+10.0 mΩ MAX.CHG.	+3.8 mΩ MAX.CHG.
ERF8/ERM8 (50Au)	+10.0 mΩ MAX.CHG.	OPEN(1)
1 CYCLE		
ERF8/ERM8 (30Au)	NO DAMAGE	CORROSION
ERF8/ERM8 (50Au)	NO DAMAGE	CORROSION
LLCR		
ERF8/ERM8 (30Au)	+10.0 mΩ MAX.CHG.	+2.4 mΩ MAX.CHG.
ERF8/ERM8 (50Au)	+10.0 mΩ MAX.CHG.	+5.1 mΩ MAX.CHG.
MFG - MATED		
ERF8/ERM8 (30Au)	NO DAMAGE	CORROSION
ERF8/ERM8 (50Au)	NO DAMAGE	CORROSION
LLCR		
ERF8/ERM8 (30Au)	+10.0 mΩ MAX.CHG.	+5.3 mΩ MAX.CHG.
ERF8/ERM8 (50Au)	+10.0 mΩ MAX.CHG.	OPEN (1)

Note: The data within the () indicates the number of positions with LLCR opens.



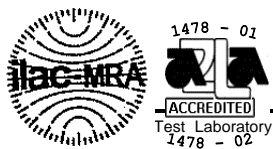
DATA SUMMARY -continued

<u>TEST</u>	<u>REQUIREMENT</u>	<u>RESULT</u>
<u>GROUP A -continued</u>		
1 CYCLE		
ERF8/ERM8 (30Au)	NO DAMAGE	CORROSION
ERF8/ERM8 (50Au)	NO DAMAGE	CORROSION
LLCR		
ERF8/ERM8 (30Au)	+10.0 mΩ MAX.CHG.	+8.9 mΩ MAX.CHG.
ERF8/ERM8 (50Au)	+10.0 mΩ MAX.CHG..	+7.1 mΩ MAX.CHG.



EQUIPMENT LIST

ID#	Next Cal	Last Cal	Equipment Name	Manufacturer	Model #	Serial #	Accuracy	Freq. Cal
102	2/27/2010	2/27/2009	Data Acquisition Unit	Hewlett Packard	3421A	2338A02027	±. 5 %Of Indicated	12mon
244	9/22/2009	9/22/2008	Micro-Ohm Meter	Keithley Instr.	580-1	467496	See Cal Cert	12mon
270			MFG Chamber	Contech Research	5 Cu Ft	N/A	N/A	Ea Test
297	11/13/2009	11/13/2008	Micro-Ohm Meter	Keithley Instr.	580	485414	See Cal Cert	12mon
323			Computer	Legatech	286-12	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
488			X-Y Table	N.E.Affiliated Tech.	N/A	932021	N/A	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	12/3/2009	12/3/2008	Analytical Balance	Ohaus Co.	AP250D	MO9198	± .4mg	12mon
1027			Computer	ARC Co.	Pent.133	026871	N/A	N/A
1110			Elect.Liquid Level Control	Cole Parmer	7187	15986	N/A	N/A
1116			Computer	ARC. Co.	P111-450		N/A	N/A
1296			MFG Control Panel	Contech Research	N/A	N/A	N/A	N/A
1381			Air Dryer	Balston	75-20	A03391	See Manual	N/A
1382			Force Gage Stand	Chatillon	20025	N/A	N/A	N/A
1507	4/6/2010	4/6/2009	Temp Humid Transmitter	Vaisala	HMT333	C1110019	See Cal Cert	12mon
1571			Chlorine Analyzer	IMS CO.	Air Sentury	1265AN	See Manual	EA Test
1595			H2S Analyzer	Teledyne Analyzer	101-E	1231	See Manual	Each Test
1599			NO2 Analyzer	Teledyne Analyzer	200E	289	See cert	12mon



TEST RESULTS

GROUP A



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)

<u>Sample ID#</u>	<u>Avg.</u>	<u>Max.</u>	<u>Min.</u>
<u>GP 1 ERF8/ERM8-(30Au)</u>			
1-2	17.7	18.7	16.9
1-4	17.7	19.1	17.1
1-5	17.8	19.2	16.9
1-6	17.8	18.6	17.1
1-7	17.8	18.7	17.4
1-8	17.8	18.4	16.8
1-75	18.3	19.5	17.2
1-76	18.5	20.2	17.5

LOW LEVEL CIRCUIT RESISTANCE
(milliohms)

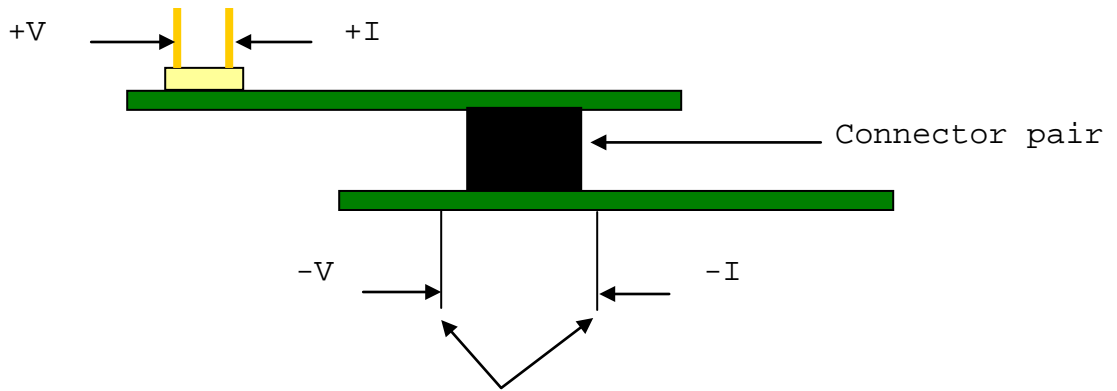
<u>Sample ID#</u>	<u>Avg.</u>	<u>Max.</u>	<u>Min.</u>
<u>GP 1 ERF8/ERM8-(50Au)</u>			
1-9	17.6	18.9	16.8
1-10A	17.1	17.7	16.1
1-11	17.1	18.1	16.5
1-12	17.3	18.4	16.7
1-13	17.4	18.1	17.0
1-14	17.2	18.7	16.6
1-15	17.6	18.5	16.7
1-16A	17.6	18.3	16.8

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

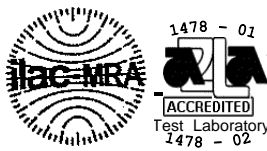


FIGURE #2

TYPICAL LLCR SET UP



Buss wires are soldered to the 2 PTH's



PROJECT NO.: 209107-1 SPECIFICATION: EIA-364

 PART NO.: See page 4 PART DESCRIPTION: See page 4

 SAMPLE SIZE: 16 connectors TECHNICIAN: DAM

 START DATE: 3/10/09 COMPLETE DATE: 3/11/09

 ROOM AMBIENT: 22°C RELATIVE HUMIDITY: 25%

 EQUIPMENT ID#: 488, 1382

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.

-continued on next page.

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. The following is a summary of the data observed:

<u>Sample ID#</u>	<u>CHANGE IN LOW LEVEL CIRCUIT RESISTANCE (milliohms)</u>	
	<u>Avg. Change</u>	<u>Max. Change</u>
<u>GP 1 ERF8/ERM8-(30Au)</u>		
1-2	+0.1	+0.6
1-4	-0.2	+0.6
1-5	-0.1	+0.7
1-6	-0.5	+0.6
1-7	+0.0	+1.0
1-8	+0.0	+1.3
1-75	-0.3	+0.5
1-76	-0.3	+1.3

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

-continued on next page.



RESULTS: -continued

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

<u>Sample ID#</u>	<u>CHANGE IN LOW LEVEL CIRCUIT RESISTANCE (milliohms)</u>	
	<u>Avg. Change</u>	<u>Max. Change</u>
<u>GP 1 ERF8/ERM8-(50Au)</u>		
1-9	+0.0	+0.8
1-10A	+0.2	+0.9
1-11	+0.0	+0.6
1-12	-0.1	+0.5
1-13	+0.0	+0.9
1-14	+0.1	+1.2
1-15	+0.0	+0.5
1-16A	+0.5	+1.4

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



PROCEDURE: -continued

2. Environmental Conditions:

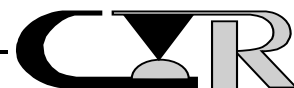
- a) Temperature : 30°C ± 1°C
- b) Relative Humidity : 70% ± 2%
- c) Cl₂ : 10 ± 3 ppb
- d) NO₂ : 200 ± 50 ppb
- e) H₂S : 10 ± 5 ppb
- f) SO₂ : 100 ± 20 ppb
- g) Exposure Time : 14 days
- h) Mating Conditions : First 7 days -unmated
Second 7 days -mated

- 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: See Next Page



RESULTS:

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

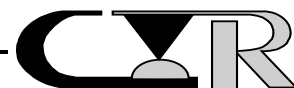
<u>Sample ID#</u>	<u>Avg. Change</u>	<u>Max. Change</u>	<u>Avg. Change</u>	<u>Max. Change</u>
<u>GP 1 ERF8/ERM8-(30Au)</u>				
	<u>@ 7 Days</u>		<u>1 Cycle</u>	
1-2	+0.2	+1.2	+0.5	+1.2
1-4	-0.1	+1.6	+0.1	+1.2
1-5	-0.1	+2.4	+0.3	+1.7
1-6	+0.3	+1.6	-0.1	+1.1
1-7	+0.1	+1.2	+0.3	+1.7
1-8	+0.5	+2.1	+1.0	+2.4
1-75	-0.1	+3.8	-0.2	+1.3
1-76	-0.5	+0.9	-0.6	+0.5

MAXIMUM CHANGE IN
LOW LEVEL CIRCUIT RESISTANCE
(milliohms)

<u>Sample ID#</u>	<u>Avg. Change</u>	<u>Max. Change</u>	<u>Avg. Change</u>	<u>Max. Change</u>
<u>GP 1 ERF8/ERM8-(50Au)</u>				
	<u>@ 7 Days</u>		<u>1 Cycle</u>	
1-9	+0.2	+1.5	+0.1	+1.5
1-10A	+0.4	+1.7	+0.4	+1.4
1-11	+0.4	+1.0	+0.7	+2.1
1-12	+0.3	+1.1	+0.3	+1.0
1-13	+0.1	+1.1	+0.1	+0.7
1-14	+0.0	OPEN(1)	+0.4	+5.1
1-15	+0.1	+1.3	+0.1	+1.3
1-16A	+0.1	+0.9	+0.4	+1.0

Note: The data within the () indicates the number of positions with LLCR opens.

-continued on next page.



RESULTS: -continued

3. The following is a summary of the data observed following the 14 days portion of the exposure:

MAXIMUM CHANGE IN
LOW LEVEL CIRCUIT RESISTANCE
(milliohms)

<u>Sample ID#</u>	<u>Avg. Change</u>	<u>Max. Change</u>	<u>Avg. Change</u>	<u>Max. Change</u>
<u>GP 1 ERF8/ERM8-(30Au)</u>	<u>@ 14 Days</u>		<u>1 Cycle</u>	
1-2	+0.2	+0.8	+0.7	+3.5
1-4	+0.2	+3.5	+0.5	+2.8
1-5	+0.2	+5.2	+0.1	+1.8
1-6	+0.0	+5.3	-0.1	+1.1
1-7	+0.3	+4.8	+0.8	+8.9
1-8	+0.6	+2.5	+0.8	+2.7
1-75	+0.7	+3.5	+1.3	+7.0
1-76	+0.2	+2.2	+0.3	+2.9

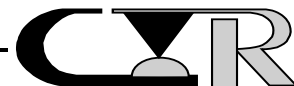
MAXIMUM CHANGE IN
LOW LEVEL CIRCUIT RESISTANCE
(Milliohms)

<u>Sample ID#</u>	<u>Avg. Change</u>	<u>Max. Change</u>	<u>Avg. Change</u>	<u>Max. Change</u>
<u>GP 1 ERF8/ERM8-(50Au)</u>	<u>@ 14 Days</u>		<u>1 Cycle</u>	
1-9	+0.1	+3.0	-0.1	+1.0
1-10A	+0.3	+1.5	+0.2	+1.1
1-11	+0.5	+4.0	+0.1	+1.4
1-12	+0.3	+1.2	+0.3	+1.4
1-13	-0.1	+0.4	+0.0	+0.9
1-14	-0.1	OPEN(1)	+0.1	+1.6
1-15	-0.1	+0.7	+0.0	+1.1
1-16A	+0.1	+1.2	+0.1	+7.1

Note: The data within the () indicates the number of positions with LLCR opens.

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

-continued on next page.



RESULTS: -continued

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

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

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



LLCR DATA FILES

FILE NUMBERS

30 Au

Group 1

20910702

20910704

20910705

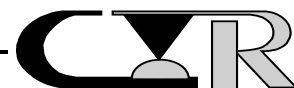
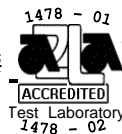
20910706

20910707

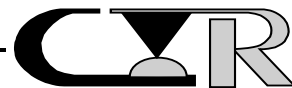
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20910775

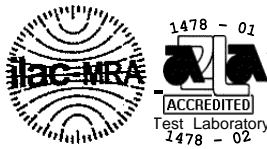
20910776



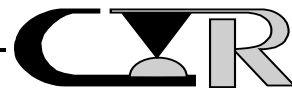
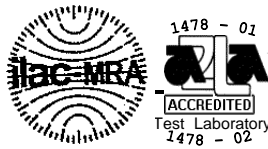
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 2
Product:	ERF8/ERM8				File No:	20910702
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100ma
Units:	milliohms					
Temp °C	22	21	21	21	21	22
R.H. %	25	28	25	25	30	27
Date:	06Mar09	10Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	18.4	-0.5	0.5	0.6	0.5	0.1
2	17.8	0.2	0.8	0.3	0.3	3.5
3	17.4	0.2	0.2	0.4	0.1	0.3
4	18.7	0.1	-0.1	0.4	0.1	0.6
5	17.7	0.0	0.1	0.2	0.3	0.1
6	17.8	0.1	1.2	0.3	0.7	0.5
7	17.3	0.3	0.1	0.3	0.1	1.6
8	17.3	0.0	-0.2	0.5	0.2	0.1
9	17.4	-0.2	0.0	0.5	0.4	0.2
10	17.8	-0.3	0.6	0.4	0.0	0.7
11	17.4	-0.1	-0.3	0.4	0.0	0.4
12	16.9	0.5	0.6	1.0	0.3	1.0
13	17.1	0.3	0.1	0.4	0.1	0.6
14	17.8	-0.1	-0.1	0.1	0.8	0.4
15	17.4	0.3	-0.1	0.3	0.6	0.1
16	17.7	0.6	0.1	0.3	0.1	1.0
17	17.3	0.0	-0.1	0.8	0.2	0.8
18	17.3	0.5	0.7	1.2	0.2	2.0
19	17.5	0.5	0.2	0.5	0.2	0.8
20	17.7	0.0	1.2	0.8	0.2	0.9
21	18.3	0.0	0.0	0.9	-0.2	0.1
22	17.5	-0.2	0.3	0.3	0.2	0.8
23	18.3	-0.3	0.2	0.4	0.5	0.1
24	17.9	-0.2	0.2	0.8	-0.1	0.4
25	18.4	-0.3	-0.4	0.8	-0.5	0.1
MAX	18.7	0.6	1.2	1.2	0.8	3.5
MIN	16.9	-0.5	-0.4	0.1	-0.5	0.1
AVG	17.7	0.1	0.2	0.5	0.2	0.7
STD	0.4	0.3	0.4	0.3	0.3	0.8
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



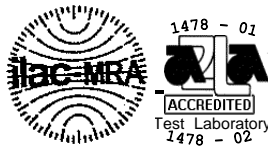
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 4
Product:	ERF8/ERM8				File No:	20910704
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	22	21	21	21	21	22
R.H. %	25	28	25	25	30	27
Date:	06Mar09	10Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days	1X	MFG 7Days	1X
			Unmated		mated	
1	17.7	-0.2	0.3	1.0	3.5	2.4
2	17.8	-0.5	-0.8	0.3	0.1	-0.7
3	17.5	-0.2	-0.8	0.1	-0.3	-0.5
4	18.1	-0.2	-1.0	0.0	-0.7	-0.8
5	17.5	0.2	-0.4	0.6	-0.1	0.2
6	17.4	0.6	0.4	0.9	0.7	1.4
7	17.2	0.0	0.3	0.4	0.6	0.0
8	17.9	-0.5	0.6	-0.2	0.7	0.6
9	17.7	-0.2	0.0	0.2	0.0	-0.1
10	17.1	-0.2	0.5	0.2	0.5	1.1
11	17.6	0.3	0.1	-0.1	0.3	0.1
12	17.3	-0.3	0.6	0.2	0.0	0.6
13	17.1	0.3	0.7	1.0	0.4	2.5
14	17.5	0.0	0.1	0.3	-0.2	-0.1
15	17.9	-0.5	-0.9	-0.1	-0.3	-0.3
16	19.1	-0.8	-0.9	-0.2	0.3	1.2
17	17.3	0.2	0.1	-0.2	0.2	-0.2
18	18.7	-1.0	-0.2	-0.5	-0.2	-0.5
19	18.2	-0.4	0.1	0.0	0.1	-0.3
20	18.1	0.2	1.6	0.0	0.6	2.8
21	17.5	0.3	-0.5	-0.3	-0.1	0.0
22	17.3	-0.1	-0.5	1.2	0.1	2.3
23	18.3	-0.4	-1.5	-0.6	-1.0	-0.8
24	17.5	-0.2	-0.7	-0.1	-0.4	0.1
25	18.0	-0.4	-0.5	-0.4	0.0	1.0
MAX	19.1	0.6	1.6	1.2	3.5	2.8
MIN	17.1	-1.0	-1.5	-0.6	-1.0	-0.8
AVG	17.7	-0.2	-0.1	0.1	0.2	0.5
STD	0.5	0.4	0.7	0.5	0.8	1.1
Open	0	0.0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



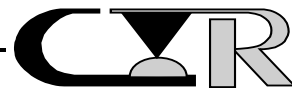
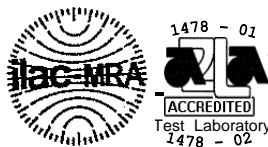
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 5
Product:	ERF8/ERM8				File No:	20910705
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	22	21	21	21	21	22
R.H. %	25	28	25	25	30	27
Date:	06Mar09	10Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Day Unmated	1X	MFG 7Day mated	1X
1	18.1	-0.6	-0.7	1.7	-0.8	0.0
2	17.6	-0.2	-0.4	0.3	-0.7	-0.4
3	17.0	0.4	-0.1	0.5	0.1	0.0
4	17.4	0.0	-0.3	0.0	-0.5	-0.5
5	17.1	0.7	-0.3	0.7	0.2	-0.4
6	17.9	-0.1	-0.3	0.2	-0.1	-0.1
7	16.9	0.4	0.6	1.5	0.3	0.5
8	17.6	-0.7	0.3	0.2	0.6	0.0
9	17.0	-0.3	1.7	0.8	2.8	1.8
10	17.4	-0.3	2.4	1.0	5.2	1.8
11	18.0	-1.1	-0.9	-0.6	-0.9	-0.9
12	17.5	-0.1	-0.8	-0.1	-0.3	-0.3
13	17.8	-0.3	-0.6	-0.6	-0.2	0.0
14	18.0	-0.6	-0.6	-0.1	-0.2	-0.3
15	17.6	0.4	-0.4	0.1	0.4	-0.3
16	18.9	0.0	-0.3	-0.7	-0.6	1.5
17	17.6	-0.1	-0.3	0.0	0.0	-0.3
18	19.0	0.6	-0.7	0.5	0.5	-0.3
19	17.7	0.0	0.0	1.1	-0.1	1.0
20	18.5	-0.8	-0.6	-0.2	-0.4	-0.6
21	18.1	0.2	0.4	-0.1	-0.2	0.2
22	17.4	0.7	0.4	0.6	0.3	-0.2
23	18.6	-0.5	-1.2	-0.3	-0.2	1.5
24	17.2	0.3	0.6	0.5	0.0	0.2
25	19.2	-1.3	-0.9	0.0	-1.2	-0.6
MAX	19.2	0.7	2.4	1.7	5.2	1.8
MIN	16.9	-1.3	-1.2	-0.7	-1.2	-0.9
AVG	17.8	-0.1	-0.1	0.3	0.2	0.1
STD	0.6	0.5	0.8	0.6	1.3	0.8
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



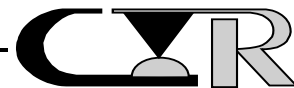
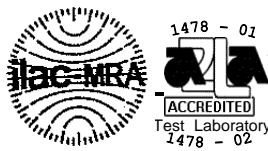
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 6
Product:	ERF8/ERM8				File No:	20910706
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	22	21	21	21	21	22
R.H. %	25	28	25	25	30	27
Date:	06Mar09	10Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days	1X	MFG 7Days	1X
			Unmated		mated	
1	18.4	-0.9	0.5	0.3	-0.5	0.3
2	17.5	0.0	0.9	0.8	0.4	0.1
3	17.4	-0.4	0.1	0.3	-0.7	-0.1
4	17.8	-0.8	0.4	-0.7	-0.7	-0.6
5	17.5	-0.7	-0.6	-0.3	-0.8	-0.5
6	18.0	-1.0	0.2	-0.3	0.0	0.0
7	17.4	-0.2	0.2	0.2	0.5	0.0
8	17.2	-0.5	0.8	1.1	5.3	0.3
9	17.6	-0.8	-0.2	-0.2	-0.1	0.3
10	17.8	-0.6	0.1	-0.3	-0.3	-0.2
11	18.6	-1.3	-0.9	-0.9	-0.9	-1.4
12	17.7	-0.3	-0.2	-0.6	-0.3	-0.6
13	17.4	-0.4	0.4	0.3	0.0	-0.1
14	17.8	0.6	1.6	0.4	-0.2	-0.4
15	17.7	-0.4	0.9	-0.4	-0.2	-0.4
16	18.5	-0.5	0.1	-0.6	0.4	-0.6
17	17.7	-0.7	0.0	-0.2	-0.4	-0.2
18	17.5	0.0	1.4	0.6	0.2	0.8
19	17.4	0.3	1.0	0.7	1.0	0.0
20	17.8	-0.1	0.8	0.7	0.2	1.1
21	18.4	-0.7	-0.8	-0.6	-0.4	-0.6
22	18.1	-1.0	-0.9	-1.1	-1.1	-1.0
23	18.1	-0.6	0.1	-0.8	-0.7	-0.5
24	17.1	0.1	1.4	0.5	-0.1	0.4
25	17.9	-0.8	0.1	-0.8	-0.7	0.0
MAX	18.6	0.6	1.6	1.1	5.3	1.1
MIN	17.1	-1.3	-0.9	-1.1	-1.1	-1.4
AVG	17.8	-0.5	0.3	-0.1	0.0	-0.1
STD	0.4	0.4	0.7	0.6	1.2	0.5
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



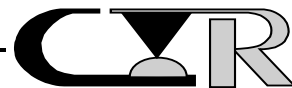
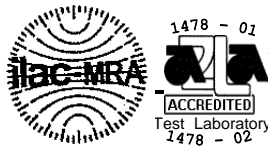
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 7
Product:	ERF8/ERM8				File No:	20910707
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	22	21	21	21	21	22
R.H. %	25	28	25	25	30	27
Date:	06Mar09	10Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7 Days	1X	MFG 7days	1X
			Unmated			
1	17.9	0.2	0.5	-0.1	0.0	0.7
2	17.7	-0.4	0.2	-0.4	-0.4	0.1
3	17.9	-0.6	-0.1	-0.3	-0.4	-0.2
4	18.7	-1.2	-0.3	-0.7	-1.6	-1.0
5	17.8	0.0	-0.3	0.0	-0.6	0.2
6	18.2	-0.2	0.3	-0.5	-0.6	-0.1
7	18.2	-0.6	-0.3	-0.4	-0.5	-0.8
8	18.0	-0.3	-0.1	-0.3	0.0	0.1
9	17.6	0.2	0.2	0.1	-0.2	0.5
10	17.4	0.1	1.0	1.7	3.3	3.2
11	17.4	0.0	-0.1	0.5	0.6	-0.1
12	17.6	0.2	0.4	0.4	0.2	0.3
13	17.9	-0.6	-0.6	0.8	-0.3	-0.2
14	17.8	0.1	-0.1	1.4	1.2	3.5
15	17.4	0.5	1.2	0.6	0.0	0.7
16	17.7	0.4	-0.1	0.7	4.8	8.9
17	17.7	0.4	-0.3	-0.1	-0.2	0.6
18	17.5	0.7	0.1	0.3	0.0	0.6
19	17.5	0.5	0.5	0.1	0.0	0.4
20	17.6	1.0	0.8	1.6	1.0	0.8
21	18.7	-0.6	-0.6	-0.2	-0.1	-0.2
22	17.6	0.1	0.5	0.4	0.4	0.4
23	18.2	-0.2	-0.6	0.8	0.3	-0.2
24	17.7	0.0	0.4	0.0	0.6	0.9
25	17.8	-0.3	-0.3	0.1	-0.1	0.1
MAX	18.7	1.0	1.2	1.7	4.8	8.9
MIN	17.4	-1.2	-0.6	-0.7	-1.6	-1.0
AVG	17.8	0.0	0.1	0.3	0.3	0.8
STD	0.4	0.5	0.5	0.7	1.3	2.0
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



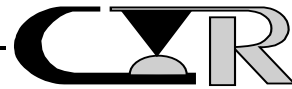
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 8
Product:	ERF8/ERM8				File No:	20910708
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	22	21	21	21	21	22
R.H. %	25	28	25	25	30	27
Date:	06Mar09	10Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days	1X	MFG 7Days	1X
			Unmated		mated	
1	17.5	-0.2	0.8	1.1	0.3	1.7
2	17.4	-0.2	0.4	0.8	0.1	0.0
3	16.8	0.5	0.2	1.2	0.6	0.6
4	17.2	-0.4	0.3	1.4	0.1	0.8
5	17.5	0.0	-0.1	1.2	0.1	-0.1
6	17.7	0.6	0.4	1.1	0.7	0.9
7	17.8	-0.1	0.3	0.8	0.1	0.9
8	17.2	0.0	1.2	1.9	0.9	2.6
9	17.7	-0.1	1.3	1.1	0.3	1.1
10	17.5	0.3	2.0	1.8	1.8	2.7
11	18.1	-0.4	1.5	0.7	1.9	0.1
12	17.4	0.0	0.5	1.1	0.3	1.6
13	18.1	-0.2	-0.4	0.8	0.4	1.1
14	18.0	0.2	0.7	1.5	0.6	0.4
15	17.8	-0.4	0.4	0.8	0.6	0.5
16	17.8	1.3	2.1	2.4	2.5	2.7
17	18.3	-0.5	-0.4	-0.2	0.2	-0.6
18	17.9	0.7	1.4	1.7	1.0	1.3
19	18.4	-0.5	0.4	0.9	0.3	0.4
20	18.4	0.2	0.6	1.0	0.5	0.3
21	17.8	-0.6	-0.4	0.1	0.1	1.2
22	17.8	-0.6	-0.3	-0.3	0.0	0.0
23	17.8	0.1	0.1	1.0	0.3	0.8
24	17.8	0.1	-0.3	0.1	0.2	0.5
25	18.1	-0.3	-0.7	-0.1	-0.2	-0.4
MAX	18.4	1.3	2.1	2.4	2.5	2.7
MIN	16.8	-0.6	-0.7	-0.3	-0.2	-0.6
AVG	17.8	0.0	0.5	1.0	0.6	0.8
STD	0.4	0.5	0.8	0.7	0.7	0.9
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 75
Product:	ERF8/ERM8				File No:	20910775
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	22	22
R.H. %	25	21	30	30	26	26
Date:	20Mar09	23Mar09	30Mar09	30Mar09	13Apr09	13Apr09
Pos. ID	Initial	25X	MFG 7days	1X	MFG 7days	1X
			Unmated		Mated	
1	18.3	-0.3	-0.3	1.3	2.3	2.8
2	17.2	0.5	-0.1	0.0	0.7	2.9
3	17.5	0.5	-0.5	0.0	0.1	0.7
4	18.0	-0.3	3.8	0.6	2.5	7.0
5	17.6	-0.2	0.0	0.1	1.4	2.2
6	18.4	0.1	0.9	0.8	1.3	7.0
7	17.5	0.3	-0.2	0.0	0.4	0.7
8	18.9	-0.3	-0.5	0.6	0.9	-0.2
9	18.6	-0.8	-0.8	-0.6	1.2	5.2
10	18.3	-0.9	-0.6	-0.3	0.6	0.8
11	18.2	-0.4	-0.3	0.4	2.4	2.5
12	18.4	-0.4	-1.0	-0.9	2.9	-0.2
13	18.4	-0.7	-0.6	-0.2	3.5	-0.6
14	18.9	-0.4	-0.8	0.3	1.0	0.5
15	18.1	-0.5	-0.3	-0.2	0.0	-0.3
16	19.4	-0.9	0.7	-0.6	0.4	0.9
17	17.9	0.1	0.0	-0.4	-0.4	-0.1
18	18.3	0.3	1.1	-0.2	0.1	2.1
19	18.6	-0.4	0.1	0.1	-0.3	1.2
20	18.6	0.1	0.8	-0.2	-0.1	0.3
21	19.5	-1.6	-2.0	-2.2	-1.3	-1.4
22	17.8	0.2	-0.5	-0.3	-0.3	-0.5
23	18.7	0.0	-0.8	-1.2	-0.8	-0.6
24	18.4	-0.7	-0.7	-0.9	0.0	-0.4
25	18.4	-0.2	-0.4	-0.5	-0.6	-0.2
MAX	19.5	0.5	3.8	1.3	3.5	7.0
MIN	17.2	-1.6	-2.0	-2.2	-1.3	-1.4
AVG	18.3	-0.3	-0.1	-0.2	0.7	1.3
STD	0.6	0.5	1.1	0.7	1.2	2.3
Open	0	0	0	0	0	0
Tech	DAM	DAM	DAM	DAM	DAM	DAM
Equip ID	323	323	323	323	323	323
	297	297	297	297	297	297



Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 76
Product:	ERF8/ERM8				File No:	20910776
Description:	30au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	21	21	21	22	20
R.H. %	20	20	30	30	26	27
Date:	24Mar09	24Mar09	30Mar09	30Mar09	13Apr09	14Apr09
Pos. ID	Initial	25X	MFG 7days	1X	MFG 7days	1X
			Unmated		Mated	
1	18.5	-0.4	-0.2	-0.3	2.2	1.1
2	17.5	0.4	0.2	0.4	0.4	0.2
3	17.6	-0.1	0.2	-0.1	0.6	0.2
4	17.9	-0.3	0.8	-0.3	0.6	0.1
5	18.1	-0.2	-0.9	-0.5	-0.5	-0.4
6	18.1	0.6	-0.4	0.2	1.2	1.5
7	18.3	-0.5	-0.4	0.0	1.7	1.9
8	18.8	-0.6	-1.0	-0.8	0.1	-1.0
9	19.0	-1.3	-1.0	-0.3	-1.1	2.0
10	20.2	-1.8	-2.2	-1.8	0.1	0.2
11	20.0	-1.9	-2.7	-1.7	-1.9	-1.7
12	18.7	-0.3	-1.4	-1.0	0.0	-0.9
13	17.9	-0.1	-0.2	-0.6	-0.1	-0.5
14	17.8	1.0	-0.5	-0.3	1.2	-0.1
15	18.6	-0.6	-0.1	-0.6	0.6	1.3
16	18.6	-0.6	-0.9	-1.1	1.5	1.5
17	18.0	0.1	0.3	-0.1	-0.3	-0.2
18	18.5	-0.3	0.5	-1.2	1.8	2.2
19	18.3	0.1	-0.1	-0.6	-0.5	-0.2
20	18.6	-0.1	-0.5	0.2	-0.8	2.9
21	18.3	-0.1	-0.5	-0.9	-0.6	-0.3
22	18.1	-0.6	-0.8	-1.1	0.2	-0.9
23	19.2	-0.8	-1.4	-2.1	-1.0	-1.0
24	17.9	1.3	0.9	0.5	0.5	-0.4
25	19.4	-0.1	-0.6	-1.4	-0.3	-1.0
MAX	20.2	1.3	0.9	0.5	2.2	2.9
MIN	17.5	-1.9	-2.7	-2.1	-1.9	-1.7
AVG	18.5	-0.3	-0.5	-0.6	0.2	0.3
STD	0.7	0.7	0.8	0.7	1.0	1.2
Open	0	0	0	0	0	0
Tech	DAM	DAM	DAM	DAM	DAM	DAM
Equip ID	323	323	323	323	323	323
	297	297	297	297	297	297



Contech Research

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LLCR DATA FILES

FILE NUMBERS

50 Au

Group 1

20910709

20910710A

20910711

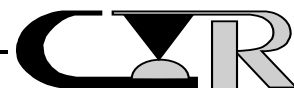
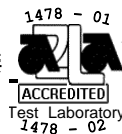
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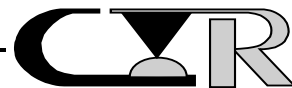
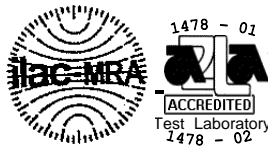
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20910715

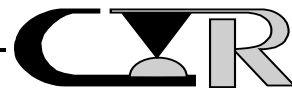
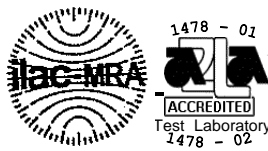
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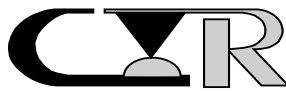
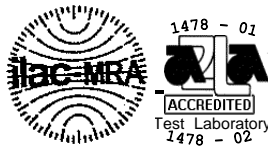
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 9
Product:	ERF8/ERM8				File No:	20910709
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	18.1	0.0	-0.3	-0.2	-0.2	-0.8
2	16.8	0.2	-0.1	-0.4	0.1	-0.4
3	17.8	0.5	-0.1	-0.1	0.0	0.0
4	16.9	0.3	0.8	-0.1	-0.1	0.2
5	16.8	0.5	0.6	0.0	0.4	0.4
6	18.0	0.4	-0.4	-0.5	-0.8	-0.8
7	17.0	0.5	0.7	1.3	3.0	0.2
8	17.2	0.1	0.3	0.0	-0.3	0.1
9	17.4	0.0	0.0	0.0	0.0	-0.4
10	16.8	0.1	0.2	0.0	0.1	0.1
11	17.1	0.5	0.4	0.2	0.3	0.0
12	17.5	-0.4	-0.1	-0.2	-0.2	-0.4
13	17.6	-0.5	0.3	-0.1	-0.3	-0.4
14	17.8	-0.5	0.1	-0.4	-0.1	-0.5
15	17.8	0.6	0.5	0.2	0.2	0.1
16	18.4	-0.8	-1.0	-1.0	-0.7	-1.0
17	17.7	0.2	0.3	-0.1	0.3	0.2
18	18.9	-1.4	-0.8	-0.8	-1.2	-1.2
19	17.9	0.1	0.3	1.0	0.5	0.4
20	18.4	-0.4	-0.2	0.7	0.7	0.0
21	17.7	-0.4	0.2	0.0	-0.2	-0.1
22	17.6	-0.4	0.0	0.1	-0.2	-0.3
23	17.6	-0.4	0.3	0.0	0.4	-0.2
24	17.4	0.8	0.6	1.5	0.4	1.0
25	17.4	0.1	1.5	0.7	0.7	1.0
MAX	18.9	0.8	1.5	1.5	3.0	1.0
MIN	16.8	-1.4	-1.0	-1.0	-1.2	-1.2
AVG	17.6	0.0	0.2	0.1	0.1	-0.1
STD	0.5	0.5	0.5	0.6	0.8	0.5
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



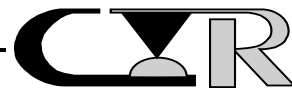
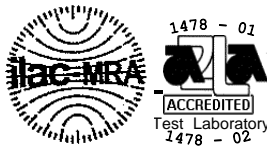
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 10A
Product:	ERF8/ERM8				File No:	20910710A
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	17.3	0.3	0.9	0.5	0.3	0.4
2	17.2	0.0	-0.5	0.6	0.1	0.1
3	17.0	0.0	0.9	0.2	0.3	0.2
4	16.6	0.2	0.8	0.8	0.8	0.7
5	16.6	0.1	0.2	0.8	0.1	0.5
6	17.7	0.1	-0.5	0.1	0.1	0.2
7	17.0	0.3	0.4	0.7	0.2	0.2
8	16.7	0.5	0.6	0.7	0.2	0.4
9	17.1	0.0	-0.1	0.3	0.1	-0.3
10	16.1	0.9	1.7	1.4	1.1	1.1
11	16.5	0.4	0.7	1.1	0.8	0.5
12	16.7	0.3	0.2	0.0	-0.1	-0.2
13	16.4	0.3	0.6	0.7	0.6	0.3
14	16.8	0.1	0.3	0.2	0.1	0.1
15	17.2	0.5	0.6	1.3	1.5	0.8
16	16.8	0.2	1.0	0.2	0.4	0.3
17	17.4	0.0	0.8	0.1	0.0	-0.1
18	17.4	-0.2	-0.2	0.0	-0.4	-0.4
19	17.6	0.7	1.3	0.3	0.5	0.0
20	17.5	-0.4	-0.5	-0.2	-0.1	0.3
21	16.8	0.4	0.5	0.3	0.2	0.6
22	17.2	0.4	0.3	0.6	0.1	0.0
23	17.7	0.4	-0.1	-0.5	0.6	-0.3
24	17.3	0.0	0.2	0.1	0.3	0.2
25	17.4	-1.5	-0.1	-0.5	-0.2	-0.3
MAX	17.7	0.9	1.7	1.4	1.5	1.1
MIN	16.1	-1.5	-0.5	-0.5	-0.4	-0.4
AVG	17.1	0.2	0.4	0.4	0.3	0.2
STD	0.4	0.4	0.6	0.5	0.4	0.4
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



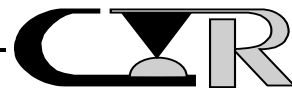
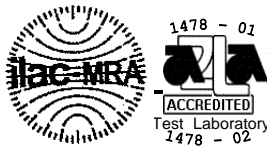
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 11
Product:	ERF8/ERM8				File No:	20910711
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days	1X	MFG 7Days	1X
			Unmated		mated	
1	17.5	0.1	0.7	1.6	4.0	1.4
2	16.9	0.1	0.4	1.4	1.1	-0.2
3	17.0	0.1	0.7	2.1	1.3	-0.6
4	16.9	0.6	0.9	1.1	0.6	-0.1
5	16.9	0.0	0.2	0.7	0.6	0.0
6	16.5	0.3	0.7	1.8	1.6	0.1
7	17.2	-0.1	0.4	0.9	0.7	-0.1
8	16.9	-0.1	0.0	0.8	0.7	-0.4
9	17.2	-0.3	0.0	0.7	0.2	-0.3
10	17.8	-0.6	-0.4	-0.2	-0.4	-0.3
11	17.1	-0.3	0.1	0.4	0.4	-0.2
12	16.8	-0.3	0.3	0.4	0.2	0.1
13	17.1	0.0	0.2	0.7	0.0	0.1
14	17.4	-0.4	0.4	0.5	-0.3	0.0
15	18.1	-0.8	0.2	-0.6	-0.8	-0.9
16	17.6	-0.7	-0.3	-0.1	-0.4	-0.2
17	17.7	-0.1	0.2	0.3	0.4	0.6
18	17.3	-0.1	0.6	0.2	0.1	-0.1
19	17.4	0.0	0.3	1.6	0.3	0.3
20	17.0	0.3	0.7	0.7	0.1	0.8
21	16.9	0.5	0.9	0.8	0.3	0.7
22	16.7	0.5	0.5	0.6	0.1	0.9
23	16.7	0.4	1.0	0.5	1.2	0.7
24	17.2	0.1	0.7	0.4	-0.2	0.4
25	16.9	0.1	0.9	0.9	0.5	0.6
MAX	18.1	0.6	1.0	2.1	4.0	1.4
MIN	16.5	-0.8	-0.4	-0.6	-0.8	-0.9
AVG	17.1	0.0	0.4	0.7	0.5	0.1
STD	0.4	0.4	0.4	0.6	0.9	0.5
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



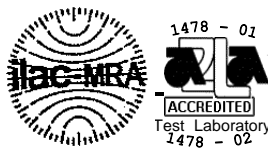
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 12
Product:	ERF8/ERM8				File No:	20910712
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25x	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	18.4	-0.8	-0.3	0.2	-0.2	0.1
2	17.2	0.3	0.4	0.4	0.3	1.1
3	16.9	0.5	0.7	0.5	1.2	0.9
4	16.7	0.2	0.7	0.4	0.1	0.2
5	17.0	0.1	0.1	0.5	-0.1	0.6
6	16.8	0.5	1.1	0.0	0.6	0.8
7	18.0	-0.1	0.9	0.0	-0.5	-0.4
8	16.8	0.3	0.9	1.0	0.8	0.0
9	16.8	0.0	0.8	0.8	0.7	0.1
10	16.9	-0.2	0.6	0.2	0.2	0.1
11	16.7	0.1	0.3	0.7	0.7	0.3
12	17.0	-0.6	0.2	0.1	0.5	-0.1
13	17.1	-0.2	0.5	0.5	0.7	0.5
14	17.0	-0.3	-0.3	-0.2	-0.1	0.4
15	17.2	-0.3	0.0	0.0	0.0	0.6
16	17.7	0.1	-0.2	-0.6	-0.4	0.1
17	17.6	-0.2	-0.2	-0.1	-0.1	0.0
18	17.9	-0.4	-0.4	0.2	-0.4	-0.3
19	17.2	-0.4	0.4	0.9	0.4	0.6
20	17.4	-0.2	-0.3	0.2	-0.4	0.0
21	17.3	0.3	0.1	0.1	0.7	1.4
22	17.1	-0.2	0.6	0.4	0.2	0.2
23	17.7	-0.1	0.1	0.1	0.6	0.2
24	18.4	-0.8	0.0	-0.6	0.6	-0.3
25	17.1	0.0	0.1	0.7	0.9	-0.1
MAX	18.4	0.5	1.1	1.0	1.2	1.4
MIN	16.7	-0.8	-0.4	-0.6	-0.5	-0.4
AVG	17.3	-0.1	0.3	0.3	0.3	0.3
STD	0.5	0.3	0.4	0.4	0.5	0.4
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



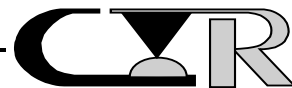
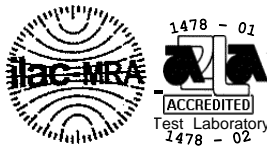
Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 13
Product:	ERF8/ERM8				File No:	20910713
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25x	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	18.0	-0.9	-0.5	-0.5	-0.8	-0.2
2	17.9	0.0	1.1	0.6	-0.1	0.2
3	17.6	0.2	0.1	-0.4	0.3	0.3
4	17.5	-0.1	-0.7	0.4	-0.1	-0.4
5	17.1	0.0	0.1	0.2	0.3	0.2
6	17.1	-0.2	0.4	0.7	0.2	0.6
7	17.3	0.0	0.1	0.2	0.1	0.2
8	17.0	-0.2	0.1	0.0	0.4	0.1
9	17.5	-0.2	-0.5	-0.6	-0.4	-0.4
10	17.4	-0.3	-0.4	0.0	-0.3	-0.4
11	17.4	-0.4	-0.4	0.0	-0.4	0.0
12	17.4	-0.4	-0.4	-0.6	-0.6	-0.5
13	17.3	0.2	-0.4	-0.2	-0.4	-0.4
14	17.0	0.0	0.0	0.3	0.0	0.0
15	17.1	0.2	0.0	0.4	0.3	0.0
16	17.1	-0.1	0.1	0.3	-0.3	-0.1
17	18.1	-0.1	0.0	-0.5	-0.1	-0.6
18	17.1	0.3	0.9	0.6	0.2	0.9
19	18.0	0.5	0.3	0.2	-0.4	0.0
20	17.6	-0.2	-0.3	-0.3	-0.4	-0.4
21	17.3	0.3	0.4	0.7	0.2	0.2
22	17.0	0.6	0.1	0.0	0.2	0.2
23	17.3	0.2	0.1	0.1	0.0	0.1
24	17.1	0.9	0.7	0.2	-0.1	0.6
25	17.4	0.6	0.6	0.3	0.0	0.3
MAX	18.1	0.9	1.1	0.7	0.4	0.9
MIN	17.0	-0.9	-0.7	-0.6	-0.8	-0.6
AVG	17.4	0.0	0.1	0.1	-0.1	0.0
STD	0.3	0.4	0.5	0.4	0.3	0.4
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 14
Product:	ERF8/ERM8				File No:	20910714
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25x	MFG 7Days	1X	MFG 7Days	1X
			Unmated		mated	
1	17.5	0.2	-0.4	0.0	-0.2	0.0
2	16.8	0.1	0.0	0.1	0.1	-0.1
3	17.4	-0.7	0.2	-0.2	-0.5	-0.9
4	16.6	-0.1	0.0	0.0	-0.2	0.0
5	17.1	-0.2	-0.1	0.3	-0.2	0.3
6	16.8	0.4	-0.1	0.1	0.2	0.2
7	17.0	0.1	-0.1	1.7	1.0	-0.2
8	16.8	0.4	0.0	0.3	-0.2	0.6
9	17.3	-0.2	-0.3	-0.1	-0.1	-0.2
10	17.0	-0.2	0.1	-0.3	0.1	0.2
11	17.4	0.2	Open	5.1	Open	1.6
12	17.2	0.0	-0.3	0.0	-0.5	0.3
13	17.0	-0.1	0.0	0.0	-0.2	-0.1
14	17.2	0.3	0.0	0.5	0.1	0.1
15	17.1	1.2	0.1	0.7	0.1	0.3
16	17.0	0.8	0.4	0.5	0.2	0.5
17	17.5	0.4	0.7	0.2	-0.1	0.4
18	18.7	-1.0	-0.6	-0.1	-0.4	-0.7
19	17.6	-0.2	-0.3	-0.2	-0.4	-0.4
20	17.1	0.3	-0.3	0.1	-0.1	-0.3
21	17.3	0.5	0.1	0.0	-0.2	0.2
22	17.0	-0.1	0.5	0.9	0.0	0.1
23	17.3	-0.5	-0.3	0.4	0.0	-0.3
24	17.5	0.7	-0.2	0.2	-0.2	-0.3
25	16.8	0.4	0.9	0.6	0.3	0.1
MAX	18.7	1.2	0.9	5.1	1.0	1.6
MIN	16.6	-1.0	-0.6	-0.3	-0.5	-0.9
AVG	17.2	0.1	0.0	0.4	-0.1	0.1
STD	0.4	0.5	0.3	1.1	0.3	0.5
Open	0	0	1	0	1	0.0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 15
Product:	ERF8/ERM8				File No:	20910715
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25X	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	17.8	0.4	1.0	0.2	0.0	0.4
2	17.6	0.2	0.6	0.3	-0.1	1.1
3	17.4	-0.1	0.0	-0.4	-0.3	0.6
4	16.7	0.3	0.7	0.0	0.3	0.7
5	17.1	0.3	0.4	-0.2	-0.6	0.2
6	17.3	-0.1	-0.1	-0.2	-0.3	0.0
7	17.2	0.3	0.1	-0.2	-0.2	0.1
8	17.1	0.4	0.1	-0.2	0.1	0.1
9	17.1	-0.1	-0.2	-0.2	-0.3	-0.1
10	18.2	-1.0	-1.0	-1.1	-1.0	-1.3
11	18.5	-0.7	0.5	-0.5	-0.4	-0.3
12	17.3	-0.4	-0.2	0.1	-0.3	-0.2
13	17.6	-0.3	-0.2	-0.3	0.3	-0.2
14	17.7	-0.6	-0.1	-0.6	-0.2	-0.3
15	17.3	0.1	0.3	0.5	-0.2	0.0
16	17.4	0.2	0.4	0.0	-0.3	-0.2
17	17.6	0.0	-0.3	0.6	0.1	0.2
18	18.2	0.3	0.1	0.6	-0.2	-0.6
19	17.6	0.3	-0.2	0.2	0.0	0.1
20	18.1	-0.3	-0.4	1.3	0.1	-0.4
21	17.7	0.0	-0.3	-0.4	-0.2	-0.2
22	17.8	0.5	1.3	0.5	0.7	0.9
23	17.4	0.3	-0.1	0.8	-0.1	-0.1
24	17.3	0.3	-0.2	0.0	-0.2	0.2
25	18.1	0.2	0.0	0.8	0.0	0.2
MAX	18.5	0.5	1.3	1.3	0.7	1.1
MIN	16.7	-1.0	-1.0	-1.1	-1.0	-1.3
AVG	17.6	0.0	0.1	0.1	-0.1	0.0
STD	0.4	0.4	0.5	0.5	0.3	0.5
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297



Low Level Circuit Resistance - Delta Values						
Project:	209107				Spec: EIA 364 TP 23	
Customer:	Samtec				Subgroup: 1	SampleID# 16A
Product:	ERF8/ERM8				File No:	20910716A
Description:	50Au				Tech:	DAM
Open circuit voltage:	20mv				Current:	100mv
Units:	milliohms					
Temp °C	21	22	21	21	21	22
R.H. %	30	30	25	25	30	27
Date:	09Mar09	11Mar09	20Mar09	20Mar09	30Mar09	31Mar09
Pos. ID	Initial	25x	MFG 7Days Unmated	1X	MFG 7Days mated	1X
1	18.2	0.8	0.8	0.7	0.2	7.1
2	17.5	0.6	0.9	0.9	0.1	0.3
3	17.6	0.2	0.2	0.1	-0.4	-0.3
4	17.2	0.8	0.4	1.0	-0.1	0.5
5	17.3	0.6	0.5	0.8	0.3	0.1
6	17.6	0.2	-0.5	-0.2	-0.3	-0.2
7	17.4	0.0	0.0	-0.2	0.0	0.0
8	17.0	0.5	0.7	0.0	0.3	0.4
9	18.3	-0.4	-1.0	-0.8	-1.1	-1.4
10	16.8	0.2	0.5	0.6	0.0	0.0
11	17.1	0.5	0.3	0.3	0.2	0.1
12	17.0	0.2	0.5	0.3	0.5	0.0
13	17.0	0.3	0.4	0.3	-0.1	0.4
14	17.5	0.5	0.2	0.6	0.1	-0.2
15	18.0	0.5	-0.2	-0.5	-0.2	-0.3
16	17.6	0.4	0.4	0.9	-0.1	-0.5
17	17.7	0.8	-0.4	0.7	0.8	0.2
18	17.6	0.1	0.5	0.8	0.0	-0.3
19	17.5	1.4	0.1	0.8	1.2	-0.3
20	17.7	0.8	-0.4	-0.1	-0.2	-0.8
21	17.4	0.4	0.5	0.2	0.6	-0.3
22	18.0	0.8	-0.4	0.5	0.1	-0.8
23	18.0	0.2	-0.3	0.3	0.1	-0.4
24	18.0	1.2	-0.4	0.3	0.0	-0.5
25	18.0	-0.1	-0.2	0.6	-0.1	-0.9
MAX	18.3	1.4	0.9	1.0	1.2	7.1
MIN	16.8	-0.4	-1.0	-0.8	-1.1	-1.4
AVG	17.6	0.5	0.1	0.4	0.1	0.1
STD	0.4	0.4	0.5	0.5	0.4	1.5
Open	0	0	0	0	0	0
Tech	AJP	AJP	DAM	DAM	DAM	DAM
Equip ID	244	244	323	323	323	323
	1116	1116	297	297	297	297

