TEST REPORT

AMP-Holland B.V.

ENVIRONMENTAL TESTING LABORATORY

Job Number	Project Number:	Date of issue:
E97.09.01	640329/640330	January 1998

Description:	Part numbers:
Surface mount Invertible Modular Jack (4 pos./6 pos.)	338084-3, rev. code E 338086-3, rev. code D

Scope:
To determine the electrical and mechanical performance of the Surface Mount Invertible Modular Jack, when the connector is tested according to AMP Product Specification 108-19117.

Conclusions:

The measuring results of the tests of group 1 to 9 meet the requirements according to AMP Product Specification.

Test Specification: AMP Product Specification 108-19117 rev. A.

Test Carried Out: 1 See pages 4..5
2
3

Distribution: 1 E. Stellinga
2 Doc. center
3 File Lab.

Test Engineer: J. Peetjens	**Requested by:** Product Engineering
Laboratory Manager: D.M.J. Jooren.	**Classification:** Unrestricted
Disposal of Samples:	**Report Number:** 501-19004 Rev. A
Appendices:	**Page** 1 **of** 22 **Pages**

CONTENTS:

SAMPLE DESCRIPTION:

For both, the 4 pos. (P/N: 338084-3, rev. code E) and the 6 pos. (P/N: 338084-3, rev. code D) Surface Mount Invertible Modular Jack, the following testgroups were made.

Testgroups 1, 2, 3, 5, 6, 8 consist of ten Modular Jacks soldered on a testprint and 10 Plugs terminated onto a 150 mm flat oval cable with 26 AWG stranded wire.
Testgroups 4, 7 consist of ten loose piece Modular Jacks and 10 Plugs terminated onto a 150 mm flat oval cable with 26 AWG stranded wire.
Testgroup 9 consists of ten loose piece Modular Jacks.

TESTPROCEDURES:

IEC 512-2-2a:

Termination resistance:
The termination resistance was measured with an open circuit voltage of 20 mVolt and a maximum current of 100 mA DC.

IEC 512-2-3a:

Insulation resistance:
This measurement was done with a programmable electrometer. The measuring voltage was 100 Volt DC during one minute.

IEC 512-2-4a:

Voltage proof:
This measurement was done with a high voltage tester. The test duration was one minute at 1,0 kV_{rms}.

IEC 512-5-9e:

Current load cyclic:
All test samples in series were charged with a current of 1,25A, which is 125% of the maximum current as specified in the detail specification.

Current ON	: 15 minutes.
Current OFF	: 15 minutes.
Number of cycles	: 500.

IEC 512-4-6d:

Vibration:
The fixture with the connector system was mounted on a vibration table. The frequency was traversed from 10-500-10 Hz with one octave per minute. Below the cross-over frequency the samples were vibrated with an amplitude of 0,70 mm, above that frequency with an acceleration of 5g. The duration was 10 cycles in each of the three mutually perpendicular directions. The samples were provided with a circuit to detect interruptions of continuity longer than 1 micro-second.

IEC 512-5-9a:

Mechanical operation:
The samples were mated and unmated for 750 times at a rate of 500 cycles per hour and a speed of 10 mm/sec.

IEC 512-7-13b:

Mating and unmating force:
The test samples were mounted on a push-pull tester.
During a mechanical operation, with a rate of 25 mm per minute, the mating and unmating forces were measured.

Plug retention in Jack:
The test samples were mounted on a push-pull tester.
An axial load of 90N was applied to a plug mated in a Jack.

IEC 68-2-2 Ba:

Dry heat:
The samples were subjected to a dry heat test under the following conditions:

Temperature	:70°C.
Condition	:mated.
Duration	:500 hours.

IEC 68-2-20, Ta

Solderability (Method 1):
The samples were subjected to a dry heat test under the following conditions:

Temperature:	:155°C.
Duration:	:4 hours.

After that, the samples were plunged in a solderbath with a temperature of 235°C for 2 seconds.

IEC 68-2-20, Tb

Resistance to soldering heat: (Method 1a)
The samples were subjected to a temperature of 260°C for 3 minutes.

IEC 512-6-11d:

Rapid change of temperature:
The samples were subjected to a rapid change of temperature test under the following conditions:
One cycle consists of:

Upper temperature	: 70°C for 60 minutes.
Lower temperature	: -40°C for 60 minutes.
Condition	:mated.
Number of cycles	:25.

IEC 512-6-11m:

Damp heat cyclic:
The samples were subjected to a cyclic damp heat test under the following conditions:

Upper temperature	: 55 °C.
Lower temperature	: 25 °C.
Relative humidity	: 95%.
Condition	:mated.
Number of cycles	:10.

TESTSEQUENCES:

Group 1: Visual inspection
Termination resistance
Vibration
Termination resistance

Group 2: Visual inspection
Termination resistance
Current load cyclic
Termination resistance

Group 3: Visual inspection
Termination resistance
Damp heat cyclic
Termination resistance

Group 4: Visual inspection
Insulation resistance
Voltage proof
Damp heat cyclic
Insulation resistance
Voltage proof

Group 5: Visual inspection
Mating/unmating force
Termination resistance
Mechanical operation (375 cycles)
Dry heat
Termination resistance
Mechanical operation (375 cycles)
Termination resistance

Group 6: Visual inspection
Termination resistance
Rapid change of temperature
Termination resistance

Group 7: Visual inspection
Insulation resistance
Voltage proof
Rapid change of temperature
Insulation resistance
Voltage proof

Group 8: Visual inspection
Plug retention in Jack
Visual inspection

Group 9: Visual inspection
Solderability
Resistance to soldering heat
Visual inspection

EQUIPMENT USED:

Equipment	Producer	Type	Series Nb	Cal Due.
Micro-ohmmeter	Keithley	580	374687	11-98.
Electrometer	Keithley	617	325475	11-98.
High voltage tester	Sefelec	PR-12-NN	264	03-98.
Push pull tester	AMP	MkI	Blue	
Force measuring system	HBM	KWS 3073	07057	each use.
Tensile tester	Karl Frank	81560	u01.3050	12-97.
Oven	Heraeus	T5042EK	7901719	12-99.
Current source	Delta	SM 7020	01422	
Dig. Therm. meter	Keithley	874-C	T-13399	11-98.
Accelero meter	B & K	4371	650308	12-97.
Exciter control	B & K	1050	1412882	12-97.
Vibrator	Ling+B&K	PA2000	S1165-002	12-97.
Climatic chamber	Weiss	125SBDU70	200776	11-98.
Climatic chamber (TS)	Weiss	64/80DUST	224/17413	11-98.

SUMMARY OF TESTRESULTS:

REQUIREMENT **MEASURED RESULTS**

- Group 1:

The testresults of the termination resistance before and after the tests are presented in listed form on pages 11(4 pos.), 12(6 pos.)

Vibration:
During the vibration test no interruptions of continuity > 1μsec were detected.

Termination resistance, after Vibration:
maximum ΔR=20 mΩ

4 pos., max. ΔR=1,80 mΩ.
6 pos., max. ΔR=2,58 mΩ.

- Group 2:

The testresults of the termination resistance before and after the tests are presented in listed form on page 14 (4 pos.), 15 (6 pos.)

Termination resistance after current load cyclic:
maximum ΔR=20 mΩ

4 pos., max. ΔR=1,87 mΩ.
6 pos., max. ΔR=3,40 mΩ.

- Group 3:

The testresults of the termination resistance before and after the tests are presented in listed form on page 17 (4 pos.), 18 (6 pos.)

Termination resistance,after damp heat cyclic
maximum ΔR=20 mΩ

4 pos., max. ΔR=1,72 mΩ.
6 pos., max. ΔR=2,47 mΩ.

Continuation of the summary of testresults.

REQUIREMENT	MEASURED RESULTS
-Group 4:	
Insulation resistance, initial: **minimum 500 MΩ.**	All tested connectors: > **500 MΩ.**
Insulation resistance, final: **minimum 500 MΩ.**	All tested connectors: > **500 MΩ.**

Voltage proof:
All tested connectors, initial and final, passed the voltage proof, no breakdown or flashover was detected.

- Group 5:

The testresults of the mating/unmating force and the termination resistance before and after the tests, are presented listed form on page 20 (forces), 21 (4 pos.), 22/23 (6 pos.)

Termination resistance, final: **maximum ΔR=20 mΩ**	**4 pos., max. ΔR=4,14 mΩ.** **6 pos., max. ΔR=6,67 mΩ.**
Mating and Unmating Force, Initial: **maximum: 25 N**	**4 pos., max.:6,1 N.** **6 pos., max.:12,1 N.**

- Group 6:

The testresults of the termination resistance before and after the tests are presented in listed form on page 29 (4 pos.), 30 (6 pos.)

Termination resistance,after rapid change of temperature **maximum ΔR=20 mΩ**	**4 pos., max. ΔR=6,12 mΩ.** **6 pos., max. ΔR=6,84 mΩ.**

Continuation of the summary of testresults.

REQUIREMENT	MEASURED RESULTS
-Group 7:	
Insulation resistance, initial: **minimum 500 MΩ.**	All tested connectors: > **500 MΩ.**
Insulation resistance, final: **minimum 500 MΩ.**	All tested connectors: > **500 MΩ.**

Voltage proof:
All tested connectors, initial and final, passed the voltage proof, no breakdown or flashover was detected.

- Group 8:
The plugs were not dislodge from the Jack and there were no discontinuation.

- Group 9:
After the resistance to soldering heat and solderability test no deformation or defects, that are detrimental to the connector functions, were found.

TESTRESULTS: Testgroup 1

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 1	4 pos.	Termination resistance Initial
-2-:	Group 1	4 pos.	Vibration
-3-:	DR = Resistance final - Resistance initial		(Column2-Column1)

	-1-	-2-	-3-
1	55.13	54.88	-0.25
2	54.87	54.07	-0.80
3	54.57	55.10	0.53
4	55.27	55.16	-0.11
5	54.87	54.01	-0.86
6	54.71	54.12	-0.59
7	54.24	54.81	0.57
8	53.62	54.82	1.20
9	53.67	54.14	0.47
10	54.12	53.59	-0.53
11	54.16	53.60	-0.56
12	54.49	53.31	-1.18
13	53.89	53.96	0.07
14	54.16	53.90	-0.26
15	53.86	54.15	0.29
16	54.05	54.10	0.05
17	53.67	53.41	-0.26
18	54.20	52.88	-1.32
19	53.66	53.64	-0.02
20	53.89	53.28	-0.61
21	54.59	54.70	0.11
22	55.95	55.30	-0.65
23	55.44	55.70	0.26
24	54.62	54.56	-0.06
25	54.84	54.32	-0.52
26	54.66	53.20	-1.46
27	53.62	54.30	0.68
28	54.43	54.17	-0.26
29	54.12	53.82	-0.30
30	54.75	53.53	-1.22
31	53.47	54.79	1.32
32	53.90	53.90	0.00
33	54.57	54.62	0.05
34	54.71	52.91	-1.80
35	53.67	54.45	0.78
36	54.43	54.13	-0.30
37	54.15	53.83	-0.32
38	54.63	54.01	-0.62
39	53.82	55.05	1.23
40	53.75	54.65	0.90
Max.	**55.95**	**55.70**	1.32
Min.	**53.47**	**52.88**	-1.80
Mean.	**54.33**	**54.17**	-0.16

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 1	6 pos.	Termination resistance Initial
-2-:	Group 1	6 pos.	Vibration
-3-:	ΔR = Resistance final - Resistance initial		(Column2-Column1)
-1-:	Group 1	6 pos.	Termination resistance Initial
-2-:	Group 1	6 pos.	Vibration
-3-:	ΔR = Resistance final - Resistance initial		(Column2-Column1)

	-1-	-2-	-3-	-1-	-2-	-3-
1	54.94	56.90	1.96	53.99	55.93	1.94
2	55.58	56.24	0.66	54.18	55.69	1.51
3	56.69	55.97	-0.72	56.48	54.16	-2.32
4	55.90	56.69	0.79	54.29	56.49	2.20
5	56.13	55.57	-0.56	56.73	54.66	-2.07
6	56.93	54.95	-1.98	56.83	54.25	-2.58
7	54.32	55.50	1.18	54.36	55.84	1.48
8	54.91	54.95	0.04	55.03	54.87	-0.16
9	56.25	54.84	-1.41	55.63	54.91	-0.72
10	55.41	55.63	0.22	55.03	55.51	0.48
11	55.64	54.35	-1.29	55.00	54.91	-0.09
12	55.98	53.53	-2.45	55.72	54.30	-1.42
13	54.13	55.59	1.46	54.87	56.22	1.35
14	54.11	55.35	1.24	55.62	55.58	-0.04
15	55.10	54.55	-0.55	56.52	54.96	-1.56
16	55.07	54.55	-0.52	55.62	56.79	1.17
17	55.97	54.08	-1.89	55.85	55.41	-0.44
18	55.59	53.75	-1.84	56.60	54.81	-1.79
19	54.88	56.25	1.37	54.37	55.46	1.09
20	54.42	55.46	1.04	54.81	54.04	-0.77
21	56.61	55.39	-1.22	55.75	53.95	-1.80
22	55.51	56.17	0.66	54.05	55.71	1.66
23	55.08	54.76	-0.32	54.28	54.95	0.67
24	56.29	54.88	-1.41	55.46	54.23	-1.23
25	54.21	55.68	1.47	54.29	56.37	2.08
26	54.80	55.02	0.22	55.28	55.54	0.26
27	56.22	54.33	-1.89	56.83	55.37	-1.46
28	54.58	55.63	1.05	55.75	56.47	0.72
29	55.06	54.69	-0.37	55.97	54.91	-1.06
30	56.08	53.99	-2.09	56.70	54.47	-2.23
Max.	**56.93**	**56.90**	1.96	**56.83**	**56.79**	2.20
Min.	**54.11**	**53.53**	-2.45	**53.99**	**53.95**	-2.58
Mean.	**55.41**	**55.17**	-0.20	**55.40**	**55.23**	-0.13

Testgroup 2

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 2	4 pos.	Termination resistance Initial
-2-:	Group 2	4 pos.	Current cycling
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		

	-1-	*-2-*	*-3-*
1	55.50	55.36	-0.14
2	54.91	53.92	-0.99
3	55.54	54.35	-1.19
4	55.40	53.97	-1.43
5	54.29	54.19	-0.10
6	53.54	53.99	0.45
7	54.15	54.41	0.26
8	54.65	54.53	-0.12
9	54.26	53.53	-0.73
10	53.56	53.33	-0.23
11	53.80	53.27	-0.53
12	54.84	52.97	-1.87
13	54.30	54.53	0.23
14	53.73	54.08	0.35
15	53.77	54.51	0.74
16	53.76	54.72	0.96
17	54.20	54.52	0.32
18	53.68	53.59	-0.09
19	54.53	54.14	-0.39
20	53.78	53.74	-0.04
21	53.99	54.07	0.08
22	53.36	53.27	-0.09
23	54.02	54.48	0.46
24	54.03	53.85	-0.18
25	54.71	54.47	-0.24
26	54.39	54.51	0.12
27	53.82	54.24	0.42
28	53.54	53.58	0.04
29	53.93	54.36	0.43
30	53.32	53.55	0.23
31	53.90	54.02	0.12
32	54.32	54.53	0.21
33	54.49	54.04	-0.45
34	54.14	54.28	0.14
35	54.32	54.98	0.66
36	53.47	53.20	-0.27
37	53.86	53.77	-0.09
38	53.39	54.03	0.64
39	54.48	54.37	-0.11
40	54.28	54.11	-0.17
Max.	**55.54**	**55.36**	0.96
Min.	**53.32**	**52.97**	-1.87
Mean.	**54.15**	**54.08**	-0.06

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack 6 pos.

Column.	Group	Lot	Test
-1-:	Group 2	1..5	Termination resistance Initial
-2-:	group 2	1..5	Current cycling
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		
-1-:	Group 2	6..10	Termination resistance Initial
-2-:	Group 2	6..10	Current cycling
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		

	-1-	-2-	-3-	-1-	-2-	-3-
1	56.34	55.62	-0.72	56.25	55.73	-0.52
2	55.66	59.06	3.40	55.32	55.10	-0.22
3	55.25	56.65	1.40	55.62	54.89	-0.73
4	56.05	55.84	-0.21	56.67	56.08	-0.59
5	55.59	55.03	-0.56	55.19	54.15	-1.04
6	54.86	54.41	-0.45	54.25	53.45	-0.80
7	56.64	56.13	-0.51	55.93	55.61	-0.32
8	55.88	55.55	-0.33	55.61	56.80	1.19
9	56.17	58.45	2.28	54.92	55.18	0.26
10	56.82	56.33	-0.49	56.60	56.31	-0.29
11	56.26	55.29	-0.97	54.67	54.16	-0.51
12	54.83	54.36	-0.47	54.35	54.15	-0.20
13	56.78	56.09	-0.69	56.16	55.39	-0.77
14	56.44	55.65	-0.79	55.28	55.65	0.37
15	56.37	56.09	-0.28	55.78	54.87	-0.91
16	56.74	56.13	-0.61	56.72	56.35	-0.37
17	55.16	54.86	-0.30	55.26	55.08	-0.18
18	54.66	54.02	-0.64	54.89	54.50	-0.39
19	55.98	55.43	-0.55	55.92	55.23	-0.69
20	55.16	55.04	-0.12	54.88	54.54	-0.34
21	54.95	54.83	-0.12	55.14	55.24	0.10
22	57.28	56.16	-1.12	55.59	55.44	-0.15
23	55.01	54.28	-0.73	54.41	54.21	-0.20
24	54.16	53.35	-0.81	54.05	53.85	-0.20
25	55.88	55.68	-0.20	56.49	54.96	-1.53
26	55.03	54.79	-0.24	55.63	54.91	-0.72
27	55.40	56.35	0.95	55.58	55.52	-0.06
28	56.35	55.94	-0.41	56.36	55.70	-0.66
29	55.32	55.00	-0.32	54.93	54.21	-0.72
30	55.03	54.73	-0.30	53.75	53.40	-0.35
Max.	**57.28**	**59.06**	3.40	**56.72**	**56.80**	1.19
Min.	**54.16**	**53.35**	-1.12	**53.75**	**53.40**	-1.53
Mean.	**55.74**	**55.57**	-0.10	**55.41**	**55.02**	-0.30

Testgroup 3

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 3	4 pos.	Termination resistance Initial
-2-:	Group 3	4 pos.	Damp heat, cyclic
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		

	-1-	*-2-*	*-3-*
1	53.94	54.82	0.88
2	53.71	54.37	0.66
3	54.66	54.86	0.20
4	54.11	54.00	-0.11
5	54.40	54.71	0.31
6	53.87	54.87	1.00
7	54.68	55.01	0.33
8	54.07	54.53	0.46
9	53.46	54.54	1.08
10	52.62	53.34	0.72
11	53.52	55.23	1.71
12	52.74	54.46	1.72
13	53.45	53.89	0.44
14	53.44	53.83	0.39
15	54.24	54.71	0.47
16	54.17	54.65	0.48
17	53.98	54.41	0.43
18	53.12	53.59	0.47
19	54.16	54.67	0.51
20	53.73	54.08	0.35
21	54.50	55.28	0.78
22	54.10	55.02	0.92
23	54.94	55.20	0.26
24	54.67	55.23	0.56
25	53.95	54.20	0.25
26	53.37	53.94	0.57
27	53.28	53.60	0.32
28	53.59	53.67	0.08
29	54.73	54.80	0.07
30	54.67	55.31	0.64
31	55.40	55.31	-0.09
32	54.57	54.78	0.21
33	53.54	53.32	-0.22
34	53.41	53.15	-0.26
35	53.38	53.34	-0.04
36	53.52	53.51	-0.01
37	54.55	54.53	-0.02
38	53.71	54.30	0.59
39	54.55	54.98	0.43
40	54.23	54.32	0.09
Max.	**55.40**	**55.31**	1.72
Min.	**52.62**	**53.15**	-0.26
Mean.	**53.97**	**54.41**	0.44

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack 6 pos.

Column.	Group	Lot	Test
-1-:	Group 3	1..5	Termination resistance Initial
-2-:	Group 3	1..5	Damp heat, cyclic
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		
-1-:	Group 3	6..10	Termination resistance Initial
-2-:	Group 3	6..10	Damp heat, cyclic
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		

	-1-	-2-	-3-	-1-	-2-	-3-
1	55.47	55.13	-0.34	56.15	56.25	0.10
2	54.26	54.10	-0.16	54.72	57.19	2.47
3	54.20	54.14	-0.06	55.68	55.36	-0.32
4	55.31	55.41	0.10	56.34	55.89	-0.45
5	54.63	54.22	-0.41	55.01	54.73	-0.28
6	52.94	52.91	-0.03	54.22	53.78	-0.44
7	55.57	55.38	-0.19	55.30	55.18	-0.12
8	55.17	55.23	0.06	54.94	55.13	0.19
9	54.92	55.17	0.25	54.77	55.01	0.24
10	56.57	56.57	0.00	55.75	56.22	0.47
11	55.89	55.27	-0.62	54.25	54.62	0.37
12	54.06	54.06	0.00	53.99	54.32	0.33
13	54.53	54.51	-0.02	56.27	55.72	-0.55
14	53.70	54.59	0.89	55.95	54.54	-1.41
15	54.11	54.11	0.00	55.04	54.78	-0.26
16	55.23	55.29	0.06	56.27	55.64	-0.63
17	54.35	53.98	-0.37	54.63	54.41	-0.22
18	53.90	53.69	-0.21	54.02	53.67	-0.35
19	55.26	55.32	0.06	55.75	55.45	-0.30
20	54.83	55.00	0.17	54.97	56.55	1.58
21	54.74	54.99	0.25	55.40	56.05	0.65
22	55.47	55.60	0.13	55.61	55.27	-0.34
23	54.02	53.81	-0.21	53.98	53.64	-0.34
24	54.01	53.47	-0.54	53.98	53.63	-0.35
25	54.74	55.25	0.51	56.60	56.21	-0.39
26	54.82	55.22	0.40	55.42	55.61	0.19
27	54.74	55.31	0.57	54.54	55.19	0.65
28	55.96	56.02	0.06	55.77	55.86	0.09
29	54.75	54.27	-0.48	54.71	54.68	-0.03
30	54.35	53.69	-0.66	54.69	54.49	-0.20
Max.	**56.57**	**56.57**	0.89	**56.60**	**57.19**	2.47
Min.	**52.94**	**52.91**	-0.66	**53.98**	**53.63**	-1.41
Mean.	**54.75**	**54.72**	-0.02	**55.16**	**55.17**	0.02

Testgroup 5

All values represented in Newtons

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 5	4 pos.	Mating force Initial
-2-:	Group 5	6 pos.	Mating force Initial
-3-:	Group 5	4 pos.	Unmating force Initial
-4-:	Group 5	6 pos.	Unmating force Initial

	-1-	*-2-*	*-3-*	*-4-*
1	5.10	8.90	3.20	4.20
2	4.70	7.60	2.70	6.20
3	5.90	6.80	3.00	4.30
4	5.40	8.20	3.30	4.00
5	5.50	8.90	3.60	5.30
6	5.10	8.90	4.20	5.50
7	5.00	9.10	2.90	4.90
8	4.90	7.60	2.90	4.20
9	5.00	12.10	3.20	5.20
10	6.10	7.10	3.40	4.70
Max.	**6.10**	**12.10**	**4.20**	**6.20**
Min.	**4.70**	**6.80**	**2.70**	**4.00**
Mean.	**5.27**	**8.52**	**3.24**	**4.85**

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 5	4 pos.	Termination initial
-2-:	Group 5	4 pos.	Dry heat
-3-:	Group 5	4 pos.	Final
-4-:	ΔR = Resistance final - Resistance initial		(Column3-Column1)

	-1-	-2-	-3-	-4-
1	54.62	54.99	54.52	-0.10
2	53.81	54.38	53.93	0.12
3	53.89	55.34	55.57	1.68
4	52.48	53.52	52.52	0.04
5	54.24	54.41	55.81	1.57
6	54.82	55.68	57.93	3.11
7	54.33	53.57	53.70	-0.63
8	54.40	54.55	53.70	-0.70
9	53.67	55.22	55.51	1.84
10	53.03	54.00	55.05	2.02
11	53.88	54.40	54.97	1.09
12	53.66	54.35	54.63	0.97
13	53.98	54.27	54.98	1.00
14	54.15	54.29	55.08	0.93
15	54.43	54.81	58.41	3.98
16	54.39	55.14	54.57	0.18
17	53.77	55.04	53.85	0.08
18	53.57	54.77	57.71	4.14
19	53.78	54.33	55.12	1.34
20	53.89	55.15	54.77	0.88
21	53.17	53.36	54.01	0.84
22	54.12	53.54	54.88	0.76
23	53.95	53.23	53.91	-0.04
24	54.46	54.00	54.36	-0.10
25	53.60	54.71	56.02	2.42
26	53.30	54.62	54.12	0.82
27	54.63	54.77	55.07	0.44
28	54.56	55.18	55.57	1.01
29	54.85	54.13	58.74	3.89
30	56.05	55.12	56.48	0.43
31	55.04	54.68	56.18	1.14
32	54.86	54.78	56.10	1.24
33	53.91	54.84	53.98	0.07
34	53.59	56.14	54.33	0.74
35	53.91	55.93	54.32	0.41
36	53.97	55.16	54.19	0.22
37	53.75	54.96	54.33	0.58
38	53.99	55.07	55.20	1.21
39	53.28	54.45	54.98	1.70
40	53.67	54.02	54.28	0.61
Max.	**56.05**	**56.14**	**58.74**	4.14
Min.	**52.48**	**53.23**	**52.52**	-0.70
Mean.	**54.04**	**54.62**	**55.08**	1.05

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack 6 pos. plug

Column.	Group	Lot	Test
-1-:	Group 5	1..5	Termination resistance initial
-2-:	Group 5	1..5	Dry heat
-3-:	Group 5	1..5	Final
-4-:	ΔR = Resistance final - Resistance initial		(Column3-Column1)

	-1-	*-2-*	*-3-*	*-4-*
1	55.05	55.31	56.01	0.96
2	55.29	55.56	57.68	2.39
3	54.44	54.83	55.27	0.83
4	56.38	56.73	57.07	0.69
5	55.50	54.90	55.22	-0.28
6	54.19	54.07	54.23	0.04
7	54.03	53.84	54.30	0.27
8	54.28	54.00	56.57	2.29
9	56.28	56.51	56.98	0.70
10	55.06	55.23	59.54	4.48
11	55.10	55.59	55.68	0.58
12	55.57	56.10	57.38	1.81
13	53.76	55.36	55.56	1.80
14	53.02	54.51	54.73	1.71
15	53.78	52.01	52.60	-1.18
16	53.57	54.65	54.81	1.24
17	53.95	53.44	54.91	0.96
18	54.40	52.99	53.92	-0.48
19	53.16	54.80	54.61	1.45
20	54.20	57.20	58.47	4.27
21	55.63	57.13	59.29	3.66
22	54.08	55.92	56.45	2.37
23	54.16	55.58	55.20	1.04
24	55.25	55.75	55.99	0.74
25	55.70	55.76	57.39	1.69
26	55.28	55.55	57.24	1.96
27	54.38	54.20	54.70	0.32
28	55.26	56.18	56.44	1.18
29	54.59	54.50	54.88	0.29
30	54.29	53.93	54.52	0.23
Max.	**56.38**	**57.20**	**59.54**	4.48
Min.	**53.02**	**52.01**	**52.60**	-1.18
Mean.	**54.65**	**55.07**	**55.92**	1.05

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack 6 pos. plug

Column.	Group	Lot	Test
-1-:	Group 5	6..10	Termination resistance initial
-2-:	Group 5	6..10	Dry heat
-3-:	Group 5	6..10	Final
-4-:	ΔR = Resistance final - Resistance initial		(Column3-Column1)

	-1-	*-2-*	*-3-*	*-4-*
1	53.97	54.06	54.27	0.30
2	54.51	54.07	55.53	1.02
3	54.62	55.24	55.30	0.68
4	54.74	54.61	55.47	0.73
5	55.06	55.25	56.06	1.00
6	55.27	55.24	57.16	1.89
7	54.48	56.55	56.29	1.81
8	54.19	55.96	57.62	3.43
9	54.58	55.21	56.42	1.84
10	55.07	56.89	56.77	1.70
11	54.25	55.11	55.29	1.04
12	54.15	54.41	54.38	0.23
13	54.28	55.06	54.73	0.45
14	54.64	55.81	55.06	0.42
15	56.63	56.82	57.52	0.89
16	55.04	54.98	55.44	0.40
17	54.59	55.27	55.25	0.66
18	55.61	56.17	55.47	-0.14
19	55.67	57.66	58.09	2.42
20	55.34	55.40	55.59	0.25
21	54.86	55.12	54.68	-0.18
22	56.09	57.10	58.03	1.94
23	54.58	54.39	54.51	-0.07
24	54.03	53.82	54.00	-0.03
25	54.93	54.57	55.60	0.67
26	55.82	56.37	56.72	0.90
27	57.01	58.08	61.65	4.64
28	54.91	55.19	56.68	1.77
29	56.76	59.73	63.43	6.67
30	56.11	57.16	56.92	0.81
Max.	**57.01**	**59.73**	**63.43**	6.67
Min.	**53.97**	**53.82**	**54.00**	-0.18
Mean.	**55.06**	**55.71**	**56.33**	1.15

Testgroup 6

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack

Column.	Group	Lot	Test
-1-:	Group 6	4 pos.	Termination resistance Initial
-2-:	Group 6	4 pos.	Rapid change of temperature
-3-:	ΔR = Resistance final - Resistance initial		(Column2-Column1)

	-1-	*-2-*	*-3-*
1	53.19	54.98	1.79
2	53.28	56.66	3.38
3	53.08	54.38	1.30
4	52.94	53.58	0.64
5	53.98	55.45	1.47
6	54.11	58.85	4.74
7	55.37	57.52	2.15
8	54.28	55.03	0.75
9	53.94	55.08	1.14
10	54.36	58.20	3.84
11	54.69	57.17	2.48
12	54.38	54.87	0.49
13	54.71	57.95	3.24
14	53.24	57.80	4.56
15	54.90	56.67	1.77
16	54.64	55.48	0.84
17	54.21	54.74	0.53
18	52.98	55.83	2.85
19	56.04	58.29	2.25
20	54.38	54.53	0.15
21	54.04	54.82	0.78
22	53.82	55.48	1.66
23	54.72	58.89	4.17
24	53.98	54.03	0.05
25	54.20	55.36	1.16
26	53.51	59.63	6.12
27	53.99	56.67	2.68
28	54.07	55.39	1.32
29	54.18	57.19	3.01
30	53.46	55.71	2.25
31	54.15	56.37	2.22
32	53.60	54.82	1.22
33	54.60	56.68	2.08
34	54.86	56.59	1.73
35	54.39	56.48	2.09
36	55.44	56.72	1.28
37	54.27	54.96	0.69
38	54.25	56.71	2.46
39	55.14	57.49	2.35
40	55.17	56.12	0.95
Max.	**56.04**	**59.63**	6.12
Min.	**52.94**	**53.58**	0.05
Mean.	**54.21**	**56.23**	2.02

All values represented in milli-ohms.

Product name: Surface Mount Modular Jack 6 pos.

Column.	Group	Lot	Test
-1-:	Group 6	1..5	Termination resistance Initial
-2-:	Group 6	1..5	Rapid change of temperature
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		
-1-:	Group 6	6..10	Termination resistance Initial
-2-:	Group 6	6..10	Rapid change of temperature
-3-:	ΔR = Resistance final - Resistance initial (Column2-Column1)		

	-1-	-2-	-3-	-1-	-2-	-3-
1	55.17	56.37	1.20	55.80	56.46	0.66
2	54.15	55.58	1.43	55.35	56.48	1.13
3	54.44	56.68	2.24	54.41	55.35	0.94
4	55.88	57.52	1.64	56.33	59.03	2.70
5	53.93	55.06	1.13	55.14	57.31	2.17
6	53.94	53.75	-0.19	54.71	54.67	-0.04
7	55.07	55.87	0.80	55.62	56.47	0.85
8	54.14	54.84	0.70	55.24	59.07	3.83
9	54.49	56.13	1.64	54.08	55.88	1.80
10	55.80	58.03	2.23	57.15	63.99	6.84
11	54.49	56.22	1.73	53.74	57.01	3.27
12	53.98	54.34	0.36	53.00	54.20	1.20
13	56.02	56.58	0.56	55.43	56.71	1.28
14	54.66	55.74	1.08	54.90	56.96	2.06
15	54.33	55.43	1.10	54.78	55.82	1.04
16	55.27	56.99	1.72	55.71	57.59	1.88
17	54.14	56.00	1.86	52.75	53.53	0.78
18	54.00	54.04	0.04	54.48	54.81	0.33
19	56.56	57.90	1.34	55.74	56.43	0.69
20	55.35	57.00	1.65	54.89	55.65	0.76
21	55.26	57.06	1.80	54.36	55.91	1.55
22	56.02	59.76	3.74	55.17	56.09	0.92
23	55.50	58.18	2.68	54.13	54.67	0.54
24	54.21	54.27	0.06	53.60	53.94	0.34
25	55.36	55.81	0.45	56.11	56.86	0.75
26	55.12	56.37	1.25	55.83	57.90	2.07
27	54.57	55.81	1.24	55.05	56.86	1.81
28	55.47	58.17	2.70	56.05	58.23	2.18
29	53.93	56.00	2.07	55.01	55.84	0.83
30	57.38	57.65	0.27	53.83	54.47	0.64
Max.	**57.38**	**59.76**	3.74	**57.15**	**63.99**	6.84
Min.	**53.93**	**53.75**	-0.19	**52.75**	**53.53**	-0.04
Mean.	**54.95**	**56.31**	1.10	**54.95**	**56.47**	1.37