www.SeCosGmbH.com

Headquarter Address:
8F.No.33, Lane 155, Sec.3, Bei-Shen Rd.,
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Product/Process Change Notification

PCN#	Effective Date	Issue Date
2014-01-01C-04	2014/1/1	2014/1/1

PCN Classification	Product Category
Major	SOD-123FL Package

Subject

Add lead frame vendor

Affected Product(s)

SOD-123FL Package

Description of Change(s)

In order to avoid shortage of material, and enhance the speed of delivery, thus, we add a new vendor.

Content of Change(s)

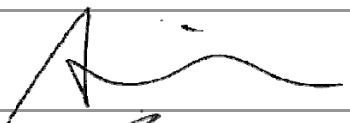
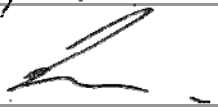
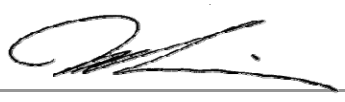
add a new lead frame vendor

Impact(s)

None

Attachment(s)

Reliability test report. SGS report.

Approval		
Issue by	Alice Lai	e-mail: alice@secosgmbh.com
Development Engineer		Alice Lai
QA Manager		Peter Yang
General Manger		Mathew Liu

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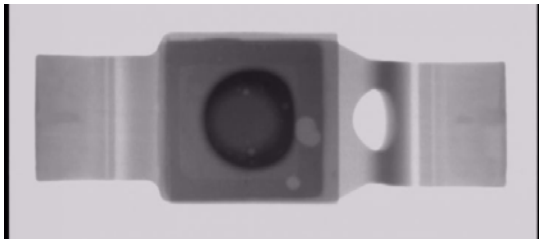
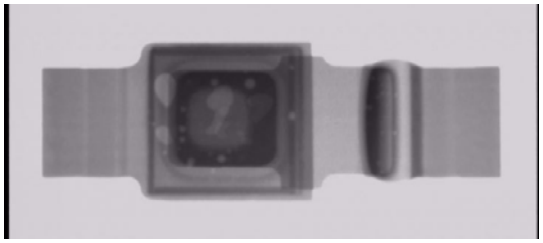
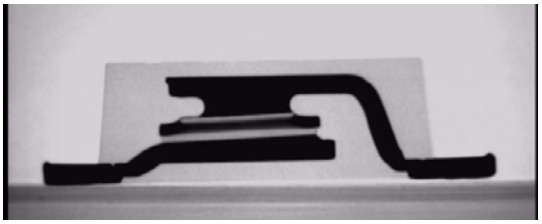
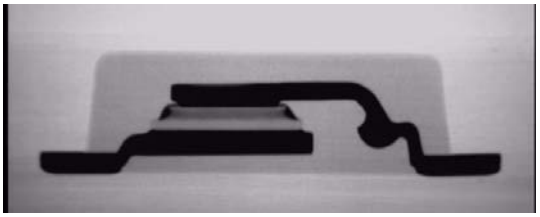
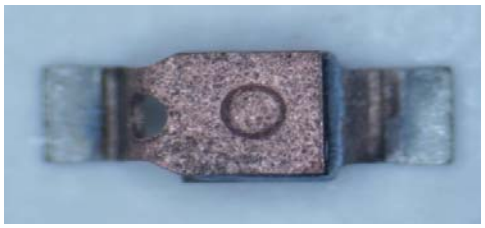
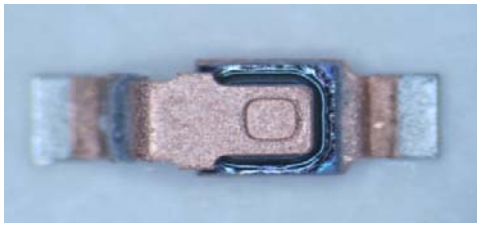
Exterior comparison Chart SOD-123FL Package	
Original	News
 Top View	 Top View
 Lateral View	 Lateral View
 Top View	 Top View
 Lateral View	 Lateral View

SeCoS Corporation

Reliability Testing Summary Report

Date: 2013/11/30 Document No.: SG13 -11- 12

Test Item	P/N	Test Condition	(LTPD)	Sample Numbers	Allow Fall Numbers	Fall Numbers	Result
HTRB High Temp Reverse Bias	SUF16FL	100 ± 5℃, 80%VR, T = 1000hrs		77	0	0	ACC
HTSL High Temperature Storage Life	SUF16FL	150℃, T = 1000hrs		77	0	0	ACC
PCT Pressure Cooker Test	SUF16FL	121℃, 29.7PSIG, RH = 100%, T = 168 hrs		77	0	0	ACC
TCT Temperature Cycle Test	SUF16FL	-55℃/30min, 150℃/30min, For 1000 Cycle		77	0	0	ACC
THT High Temperature High Humidity Test	SUF16FL	85 ± 2℃, RH = 85 ± 5%, 1000 hrs		77	0	0	ACC
H3TRB High Temper High Humidity Reverse Bies Test	SUF16FL	85 ± 2℃, RH = 85 ± 5%, 80%VR, T = 1000 hrs		77	0	0	ACC
Solderability	SUF16FL	245 ± 5℃, 5Sec the inspected area of each lead must have 95% solder coverage minimum		10	0	0	ACC

Judgment:

■ **qualified** □ **unqualified**

Testing Start Date: 2013.10.01 **Testing End Date:** 2013.11.30

Tester: Leo Hsia **Approval:** Peter Yang

SeCoS Corporation

Electrical Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 25℃
Test Date: 2013.10.01 ~ 2013.10.01
Test Standard : Specifications
Operator: Leo Hsia

Test Result: PASS

No	VF (mV)	IR (uA)
1	1111mV	0.040uA
2	1055mV	0.078uA
3	1130mV	0.040uA
4	1052mV	0.061uA
5	1060mV	0.054uA
6	1001mV	0.023uA
7	1073mV	0.084uA
8	1108mV	0.072uA
9	1043mV	0.085uA
10	1015mV	0.075uA
11	1000mV	0.053uA
12	1081mV	0.080uA
13	1080mV	0.029uA
14	1041mV	0.064uA
15	1045mV	0.075uA
16	1038mV	0.062uA
17	1108mV	0.056uA
18	1074mV	0.060uA
19	1047mV	0.033uA
20	1106mV	0.071uA
21	1021mV	0.071uA
22	1016mV	0.073uA
23	1059mV	0.054uA
24	1013mV	0.086uA
25	1041mV	0.061uA
26	1002mV	0.082uA
27	1043mV	0.074uA
28	1068mV	0.049uA
29	1089mV	0.037uA
30	1005mV	0.069uA
31	1024mV	0.048uA

SeCoS Corporation

Electrical Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 25℃
Test Date: 2013.10.01 ~ 2013.10.01
Test Standard : Specifications
Operator: Leo Hsia

Test Result: PASS

No	VF (mV)	IR (uA)
32	1101mV	0.033uA
33	1114mV	0.078uA
34	1071mV	0.030uA
35	1055mV	0.078uA
36	1113mV	0.021uA
37	1056mV	0.080uA
38	1021mV	0.036uA
39	1061mV	0.082uA
40	1039mV	0.056uA
41	1036mV	0.020uA
42	1120mV	0.031uA
43	1071mV	0.045uA
44	1017mV	0.025uA
45	1028mV	0.051uA
46	1010mV	0.060uA
47	1004mV	0.022uA
48	1024mV	0.064uA
49	1038mV	0.021uA
50	1125mV	0.051uA
51	1021mV	0.025uA
52	1105mV	0.040uA
53	1125mV	0.053uA
54	1058mV	0.051uA
55	1049mV	0.087uA
56	1118mV	0.029uA
57	1098mV	0.057uA
58	1072mV	0.065uA
59	1113mV	0.069uA
60	1018mV	0.020uA
61	1122mV	0.068uA
62	1117mV	0.063uA

SeCoS Corporation

Electrical Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 25℃
Test Date: 2013.10.01 ~ 2013.10.01
Test Standard : Specifications
Operator: Leo Hsia

Test Result: PASS

No	VF (mV)	IR (uA)
63	1024mV	0.026uA
64	1104mV	0.081uA
65	1010mV	0.044uA
66	1015mV	0.075uA
67	1043mV	0.049uA
68	1035mV	0.051uA
69	1002mV	0.067uA
70	1089mV	0.021uA
71	1032mV	0.066uA
72	1094mV	0.067uA
73	1052mV	0.076uA
74	1095mV	0.020uA
75	1117mV	0.020uA
76	1046mV	0.073uA
77	1075mV	0.049uA

Made By: Leo Hsia Approval: Peter Yang

SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 100 ± 5℃, 80%VR, T = 1000 hrs
Test Date: 2013.10.02 ~ 2013.11.13
Test Standard : JESD22 STANDER Method-A108
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1057mV	0.051uA	1090mV	0.059uA
2	1039mV	0.087uA	1107mV	0.021uA
3	1039mV	0.081uA	1037mV	0.075uA
4	1106mV	0.076uA	1024mV	0.040uA
5	1013mV	0.029uA	1020mV	0.074uA
6	1065mV	0.060uA	1071mV	0.033uA
7	1089mV	0.028uA	1104mV	0.024uA
8	1053mV	0.052uA	1110mV	0.041uA
9	1103mV	0.021uA	1086mV	0.083uA
10	1032mV	0.021uA	1089mV	0.076uA
11	1012mV	0.079uA	1078mV	0.051uA
12	1011mV	0.040uA	1121mV	0.044uA
13	1101mV	0.023uA	1045mV	0.065uA
14	1084mV	0.048uA	1019mV	0.055uA
15	1066mV	0.082uA	1069mV	0.069uA
16	1006mV	0.083uA	1011mV	0.028uA
17	1046mV	0.046uA	1083mV	0.080uA
18	1001mV	0.037uA	1058mV	0.073uA
19	1032mV	0.042uA	1011mV	0.028uA
20	1105mV	0.022uA	1041mV	0.065uA
21	1116mV	0.021uA	1119mV	0.047uA
22	1069mV	0.075uA	1086mV	0.085uA
23	1026mV	0.030uA	1005mV	0.032uA
24	1067mV	0.059uA	1078mV	0.077uA
25	1008mV	0.030uA	1118mV	0.065uA
26	1005mV	0.044uA	1065mV	0.051uA
27	1071mV	0.030uA	1068mV	0.087uA
28	1100mV	0.078uA	1010mV	0.085uA
29	1119mV	0.080uA	1093mV	0.064uA
30	1000mV	0.046uA	1041mV	0.080uA

SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 100 ± 5℃, 80%VR, T = 1000 hrs
Test Date: 2013.10.02 ~ 2013.11.13
Test Standard : JESD22 STANDER Method-A108
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
31	1073mV	0.070uA	1078mV	0.037uA
32	1051mV	0.032uA	1092mV	0.029uA
33	1070mV	0.068uA	1051mV	0.036uA
34	1110mV	0.079uA	1038mV	0.026uA
35	1009mV	0.077uA	1072mV	0.086uA
36	1003mV	0.084uA	1014mV	0.032uA
37	1078mV	0.039uA	1029mV	0.066uA
38	1049mV	0.022uA	1125mV	0.049uA
39	1125mV	0.061uA	1130mV	0.077uA
40	1119mV	0.086uA	1099mV	0.086uA
41	1027mV	0.061uA	1103mV	0.080uA
42	1071mV	0.053uA	1123mV	0.069uA
43	1035mV	0.052uA	1029mV	0.084uA
44	1033mV	0.034uA	1050mV	0.053uA
45	1108mV	0.079uA	1053mV	0.041uA
46	1064mV	0.068uA	1115mV	0.022uA
47	1006mV	0.037uA	1012mV	0.087uA
48	1081mV	0.069uA	1092mV	0.046uA
49	1091mV	0.073uA	1081mV	0.051uA
50	1034mV	0.085uA	1062mV	0.032uA
51	1078mV	0.071uA	1095mV	0.081uA
52	1109mV	0.068uA	1122mV	0.044uA
53	1029mV	0.030uA	1095mV	0.083uA
54	1115mV	0.021uA	1005mV	0.043uA
55	1043mV	0.025uA	1008mV	0.021uA
56	1055mV	0.074uA	1028mV	0.049uA
57	1061mV	0.059uA	1028mV	0.070uA
58	1110mV	0.024uA	1069mV	0.050uA
59	1030mV	0.027uA	998mV	0.075uA
60	1096mV	0.053uA	1001mV	0.085uA

SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 100 ± 5℃, 80%VR, T = 1000 hrs
Test Date: 2013.10.02 ~ 2013.11.13
Test Standard : JESD22 STANDER Method-A108
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
61	1087mV	0.049uA	1112mV	0.027uA
62	1086mV	0.041uA	1103mV	0.079uA
63	1015mV	0.070uA	1082mV	0.072uA
64	1022mV	0.050uA	1119mV	0.020uA
65	1096mV	0.036uA	1055mV	0.039uA
66	1034mV	0.074uA	1091mV	0.049uA
67	1016mV	0.082uA	1060mV	0.062uA
68	1099mV	0.040uA	1111mV	0.063uA
69	999mV	0.019uA	1096mV	0.072uA
70	1011mV	0.045uA	1072mV	0.046uA
71	1038mV	0.084uA	1077mV	0.053uA
72	1119mV	0.069uA	1118mV	0.035uA
73	1069mV	0.076uA	1089mV	0.041uA
74	999mV	0.023uA	1083mV	0.044uA
75	1101mV	0.027uA	1113mV	0.020uA
76	1049mV	0.025uA	1125mV	0.078uA
77	1004mV	0.042uA	1062mV	0.050uA

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 150℃, 1000Hrs
Test Date: 2013.10.09 ~ 2013.11.20
Test Standard : JESD22 STANDER Method-A103
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1109mV	0.069uA	1104mV	0.058uA
2	1097mV	0.028uA	1051mV	0.029uA
3	1070mV	0.045uA	1037mV	0.047uA
4	1042mV	0.070uA	1117mV	0.054uA
5	1124mV	0.059uA	1047mV	0.038uA
6	1044mV	0.026uA	1064mV	0.056uA
7	1093mV	0.062uA	1098mV	0.053uA
8	1058mV	0.034uA	1052mV	0.053uA
9	1123mV	0.061uA	1066mV	0.077uA
10	1024mV	0.030uA	1098mV	0.085uA
11	1050mV	0.032uA	1073mV	0.063uA
12	1077mV	0.080uA	1086mV	0.028uA
13	1075mV	0.082uA	1117mV	0.051uA
14	1025mV	0.059uA	1035mV	0.066uA
15	1126mV	0.028uA	1088mV	0.046uA
16	1125mV	0.023uA	1072mV	0.063uA
17	1088mV	0.082uA	1023mV	0.064uA
18	1123mV	0.027uA	1111mV	0.039uA
19	1048mV	0.053uA	1128mV	0.043uA
20	1103mV	0.058uA	1129mV	0.067uA
21	1084mV	0.085uA	1015mV	0.037uA
22	1126mV	0.051uA	1117mV	0.039uA
23	1018mV	0.055uA	1116mV	0.047uA
24	1032mV	0.041uA	1005mV	0.043uA
25	1026mV	0.065uA	1070mV	0.063uA
26	1043mV	0.022uA	1087mV	0.071uA
27	1088mV	0.035uA	1045mV	0.076uA
28	1112mV	0.080uA	1122mV	0.064uA
29	1072mV	0.049uA	1125mV	0.052uA
30	1045mV	0.028uA	1124mV	0.021uA

SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 150℃, 1000Hrs
Test Date: 2013.10.09 ~ 2013.11.20
Test Standard : JESD22 STANDER Method-A103
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
31	1057mV	0.071uA	1022mV	0.085uA
32	1104mV	0.086uA	1000mV	0.021uA
33	1044mV	0.023uA	1094mV	0.074uA
34	1016mV	0.044uA	1062mV	0.028uA
35	1076mV	0.086uA	1035mV	0.066uA
36	1012mV	0.057uA	1099mV	0.063uA
37	1110mV	0.063uA	1092mV	0.038uA
38	1047mV	0.076uA	1046mV	0.023uA
39	1090mV	0.066uA	1043mV	0.032uA
40	1067mV	0.083uA	1116mV	0.052uA
41	1120mV	0.057uA	1066mV	0.021uA
42	1046mV	0.070uA	1129mV	0.064uA
43	1121mV	0.043uA	1082mV	0.062uA
44	1119mV	0.071uA	1010mV	0.063uA
45	1088mV	0.021uA	1039mV	0.064uA
46	1009mV	0.041uA	1037mV	0.049uA
47	1130mV	0.085uA	1066mV	0.044uA
48	1102mV	0.025uA	1073mV	0.053uA
49	1063mV	0.082uA	1120mV	0.052uA
50	1037mV	0.080uA	1000mV	0.079uA
51	1012mV	0.080uA	1106mV	0.068uA
52	1041mV	0.069uA	1042mV	0.086uA
53	1098mV	0.029uA	1125mV	0.060uA
54	1040mV	0.085uA	1048mV	0.069uA
55	1030mV	0.047uA	1102mV	0.034uA
56	1009mV	0.046uA	1044mV	0.035uA
57	1031mV	0.052uA	1020mV	0.072uA
58	1071mV	0.031uA	1043mV	0.056uA
59	1108mV	0.026uA	1087mV	0.027uA
60	1108mV	0.048uA	1016mV	0.083uA

SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 150℃, 1000Hrs
Test Date: 2013.10.09 ~ 2013.11.20
Test Standard : JESD22 STANDER Method-A103
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
61	1111mV	0.054uA	1007mV	0.042uA
62	1060mV	0.043uA	1052mV	0.060uA
63	1061mV	0.068uA	1004mV	0.080uA
64	999mV	0.051uA	1080mV	0.020uA
65	1120mV	0.028uA	1042mV	0.019uA
66	1045mV	0.060uA	1017mV	0.083uA
67	1029mV	0.020uA	1098mV	0.047uA
68	1109mV	0.073uA	1023mV	0.045uA
69	1039mV	0.058uA	1017mV	0.048uA
70	1059mV	0.074uA	1043mV	0.029uA
71	1018mV	0.077uA	1032mV	0.050uA
72	1070mV	0.040uA	1031mV	0.080uA
73	1057mV	0.022uA	1075mV	0.047uA
74	1083mV	0.056uA	1051mV	0.030uA
75	1014mV	0.048uA	1119mV	0.028uA
76	1089mV	0.070uA	1033mV	0.043uA
77	1029mV	0.062uA	1061mV	0.059uA

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

Pressure Cooker Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 121℃, 100%RH, 29.7PSIG, 168Hrs
Test Date: 2013.10.21 ~ 2013.10.29
Test Standard : JESD22 STANDER Method-A102
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1065mV	0.073uA	1126mV	0.071uA
2	1064mV	0.067uA	1039mV	0.031uA
3	1097mV	0.042uA	1093mV	0.083uA
4	1074mV	0.045uA	1099mV	0.054uA
5	1070mV	0.047uA	1093mV	0.060uA
6	1117mV	0.071uA	1117mV	0.066uA
7	1071mV	0.076uA	1060mV	0.069uA
8	1049mV	0.041uA	1021mV	0.042uA
9	1128mV	0.037uA	1046mV	0.060uA
10	1103mV	0.083uA	1017mV	0.064uA
11	1006mV	0.055uA	1001mV	0.042uA
12	1023mV	0.029uA	1115mV	0.054uA
13	1112mV	0.046uA	1060mV	0.059uA
14	1021mV	0.021uA	1058mV	0.077uA
15	1039mV	0.021uA	1091mV	0.066uA
16	1100mV	0.031uA	1119mV	0.024uA
17	1021mV	0.065uA	1019mV	0.030uA
18	1097mV	0.084uA	1089mV	0.052uA
19	1080mV	0.041uA	1056mV	0.055uA
20	1029mV	0.031uA	1010mV	0.077uA
21	1056mV	0.046uA	1095mV	0.039uA
22	1119mV	0.020uA	1114mV	0.044uA
23	1057mV	0.028uA	1060mV	0.073uA
24	1112mV	0.040uA	1035mV	0.060uA
25	1058mV	0.074uA	1096mV	0.060uA
26	1029mV	0.062uA	1079mV	0.030uA
27	1084mV	0.073uA	1096mV	0.056uA
28	1124mV	0.081uA	1125mV	0.049uA
29	1129mV	0.025uA	1125mV	0.054uA
30	1130mV	0.087uA	998mV	0.084uA

SeCoS Corporation

Pressure Cooker Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 121℃, 100%RH, 29.7PSIG, 168Hrs
Test Date: 2013.10.21 ~ 2013.10.29
Test Standard : JESD22 STANDER Method-A102
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
31	1014mV	0.073uA	1114mV	0.033uA
32	1006mV	0.034uA	1059mV	0.060uA
33	1044mV	0.077uA	1106mV	0.082uA
34	1010mV	0.085uA	1090mV	0.037uA
35	1087mV	0.029uA	1003mV	0.085uA
36	1044mV	0.036uA	1125mV	0.073uA
37	1002mV	0.034uA	1052mV	0.052uA
38	1075mV	0.074uA	1084mV	0.077uA
39	1071mV	0.062uA	1016mV	0.045uA
40	1097mV	0.046uA	1074mV	0.078uA
41	1054mV	0.079uA	1042mV	0.076uA
42	1019mV	0.055uA	1012mV	0.043uA
43	1094mV	0.060uA	1045mV	0.032uA
44	1068mV	0.066uA	1126mV	0.079uA
45	1036mV	0.071uA	1023mV	0.073uA
46	1064mV	0.072uA	1008mV	0.049uA
47	1128mV	0.031uA	1126mV	0.040uA
48	1103mV	0.086uA	1128mV	0.056uA
49	1075mV	0.051uA	1040mV	0.087uA
50	1094mV	0.039uA	1026mV	0.024uA
51	1010mV	0.023uA	1013mV	0.027uA
52	1010mV	0.039uA	1042mV	0.058uA
53	1123mV	0.066uA	1061mV	0.044uA
54	1086mV	0.031uA	1129mV	0.056uA
55	1044mV	0.023uA	1092mV	0.083uA
56	1009mV	0.026uA	1069mV	0.026uA
57	1128mV	0.076uA	1120mV	0.063uA
58	1006mV	0.061uA	1065mV	0.036uA
59	1019mV	0.068uA	1063mV	0.053uA
60	1115mV	0.032uA	1040mV	0.056uA

SeCoS Corporation

Pressure Cooker Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 121℃, 100%RH, 29.7PSIG, 168Hrs
Test Date: 2013.10.21 ~ 2013.10.29
Test Standard : JESD22 STANDER Method-A102
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
61	1023mV	0.046uA	1032mV	0.087uA
62	1007mV	0.041uA	1080mV	0.070uA
63	1069mV	0.029uA	1023mV	0.050uA
64	1051mV	0.061uA	1025mV	0.070uA
65	1001mV	0.087uA	1013mV	0.060uA
66	1093mV	0.072uA	1032mV	0.023uA
67	1103mV	0.053uA	1051mV	0.034uA
68	1038mV	0.041uA	1008mV	0.057uA
69	1018mV	0.048uA	1036mV	0.051uA
70	1002mV	0.041uA	1113mV	0.053uA
71	1100mV	0.078uA	1077mV	0.030uA
72	1110mV	0.055uA	1020mV	0.059uA
73	1060mV	0.083uA	1112mV	0.035uA
74	1047mV	0.063uA	1103mV	0.081uA
75	1066mV	0.039uA	1098mV	0.039uA
76	1111mV	0.022uA	999mV	0.061uA
77	1095mV	0.065uA	1117mV	0.061uA

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

Temperature Cycle Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: -55℃/30min, 150℃/30min, for1000 Cycle
Test Date: 2013.10.02 ~ 2013.11.23
Test Standard : JESD22 STANDER Method-A104
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1061mV	0.060uA	1113mV	0.053uA
2	1120mV	0.087uA	1101mV	0.038uA
3	1103mV	0.069uA	1073mV	0.066uA
4	1075mV	0.048uA	1106mV	0.055uA
5	1083mV	0.059uA	1126mV	0.031uA
6	1055mV	0.044uA	1037mV	0.073uA
7	1034mV	0.043uA	1076mV	0.037uA
8	1113mV	0.051uA	1114mV	0.026uA
9	1089mV	0.023uA	1014mV	0.071uA
10	1074mV	0.044uA	1020mV	0.056uA
11	1071mV	0.023uA	1001mV	0.032uA
12	1005mV	0.078uA	1077mV	0.048uA
13	1053mV	0.082uA	999mV	0.039uA
14	1044mV	0.020uA	1014mV	0.023uA
15	1105mV	0.040uA	1057mV	0.052uA
16	1129mV	0.025uA	1033mV	0.072uA
17	1108mV	0.029uA	1071mV	0.078uA
18	1103mV	0.028uA	1091mV	0.042uA
19	1096mV	0.035uA	1124mV	0.068uA
20	1081mV	0.042uA	1037mV	0.024uA
21	1107mV	0.065uA	1017mV	0.075uA
22	1099mV	0.029uA	1034mV	0.080uA
23	1122mV	0.038uA	1099mV	0.025uA
24	1003mV	0.057uA	1085mV	0.049uA
25	1031mV	0.086uA	1110mV	0.041uA
26	1064mV	0.040uA	1088mV	0.058uA
27	999mV	0.071uA	1027mV	0.075uA
28	1097mV	0.066uA	1052mV	0.065uA
29	1092mV	0.037uA	1003mV	0.028uA
30	1126mV	0.070uA	1076mV	0.040uA

SeCoS Corporation

Temperature Cycle Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: -55℃/30min, 150℃/30min, for1000 Cycle
Test Date: 2013.10.02 ~ 2013.11.23
Test Standard : JESD22 STANDER Method-A104
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
31	1129mV	0.070uA	1078mV	0.057uA
32	1021mV	0.082uA	1044mV	0.035uA
33	1108mV	0.038uA	1118mV	0.027uA
34	1069mV	0.066uA	1078mV	0.023uA
35	1118mV	0.079uA	1004mV	0.060uA
36	1087mV	0.032uA	1034mV	0.045uA
37	1026mV	0.047uA	1130mV	0.077uA
38	1032mV	0.059uA	1022mV	0.080uA
39	1076mV	0.060uA	1062mV	0.045uA
40	1087mV	0.084uA	1084mV	0.032uA
41	1093mV	0.078uA	1096mV	0.069uA
42	1097mV	0.040uA	1028mV	0.042uA
43	1128mV	0.064uA	1105mV	0.052uA
44	1020mV	0.055uA	1071mV	0.053uA
45	1075mV	0.030uA	1092mV	0.080uA
46	1039mV	0.074uA	1027mV	0.074uA
47	1021mV	0.020uA	1015mV	0.076uA
48	1027mV	0.081uA	1026mV	0.055uA
49	1105mV	0.040uA	1118mV	0.057uA
50	1043mV	0.068uA	1003mV	0.082uA
51	1126mV	0.029uA	1124mV	0.059uA
52	1046mV	0.030uA	1112mV	0.038uA
53	1058mV	0.056uA	1078mV	0.064uA
54	1110mV	0.033uA	1026mV	0.083uA
55	1083mV	0.078uA	1125mV	0.063uA
56	1064mV	0.066uA	1025mV	0.081uA
57	1029mV	0.086uA	1057mV	0.034uA
58	1009mV	0.027uA	999mV	0.027uA
59	1094mV	0.070uA	1082mV	0.080uA
60	1059mV	0.068uA	1050mV	0.027uA

SeCoS Corporation

Temperature Cycle Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: -55℃/30min, 150℃/30min, for1000 Cycle
Test Date: 2013.10.02 ~ 2013.11.23
Test Standard : JESD22 STANDER Method-A104
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
61	1113mV	0.028uA	1010mV	0.068uA
62	1055mV	0.029uA	1035mV	0.067uA
63	1129mV	0.082uA	1064mV	0.025uA
64	1041mV	0.078uA	1055mV	0.057uA
65	1002mV	0.019uA	1048mV	0.023uA
66	1053mV	0.054uA	1025mV	0.038uA
67	1089mV	0.045uA	998mV	0.031uA
68	1057mV	0.057uA	1017mV	0.063uA
69	1122mV	0.030uA	1049mV	0.022uA
70	1079mV	0.051uA	1100mV	0.075uA
71	1013mV	0.045uA	1113mV	0.073uA
72	1015mV	0.029uA	1090mV	0.084uA
73	1029mV	0.025uA	1064mV	0.024uA
74	1021mV	0.020uA	999mV	0.069uA
75	1121mV	0.081uA	1111mV	0.046uA
76	1087mV	0.042uA	1061mV	0.027uA
77	1118mV	0.085uA	1015mV	0.068uA

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2013.10.17 ~ 2013.11.29
Test Standard : JESD22 STANDER Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1105mV	0.048uA	1023mV	0.058uA
2	1057mV	0.056uA	1091mV	0.021uA
3	1098mV	0.060uA	1108mV	0.019uA
4	1057mV	0.053uA	1019mV	0.078uA
5	1076mV	0.044uA	1118mV	0.038uA
6	1094mV	0.029uA	1055mV	0.020uA
7	1074mV	0.030uA	1101mV	0.072uA
8	1005mV	0.074uA	1031mV	0.060uA
9	1101mV	0.030uA	1029mV	0.054uA
10	1033mV	0.054uA	1071mV	0.073uA
11	1113mV	0.084uA	1115mV	0.077uA
12	1026mV	0.046uA	1001mV	0.027uA
13	1087mV	0.065uA	1090mV	0.045uA
14	1015mV	0.035uA	1107mV	0.033uA
15	1127mV	0.047uA	1073mV	0.035uA
16	1067mV	0.064uA	1126mV	0.074uA
17	1001mV	0.081uA	1064mV	0.074uA
18	1006mV	0.071uA	1007mV	0.078uA
19	1106mV	0.076uA	1022mV	0.055uA
20	1118mV	0.086uA	1104mV	0.058uA
21	1019mV	0.079uA	1071mV	0.029uA
22	1098mV	0.060uA	1067mV	0.024uA
23	1002mV	0.038uA	1111mV	0.061uA
24	1066mV	0.055uA	1099mV	0.039uA
25	1063mV	0.064uA	1063mV	0.036uA
26	1080mV	0.024uA	1044mV	0.058uA
27	1033mV	0.048uA	1101mV	0.080uA
28	1000mV	0.032uA	1030mV	0.082uA
29	1102mV	0.055uA	1089mV	0.032uA
30	1093mV	0.028uA	1109mV	0.019uA

SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2013.10.17 ~ 2013.11.29
Test Standard : JESD22 STANDER Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
31	1102mV	0.047uA	1011mV	0.071uA
32	1034mV	0.034uA	1040mV	0.074uA
33	1100mV	0.024uA	1091mV	0.044uA
34	998mV	0.048uA	1097mV	0.064uA
35	1115mV	0.046uA	1076mV	0.028uA
36	1060mV	0.083uA	1023mV	0.070uA
37	1115mV	0.083uA	1100mV	0.083uA
38	1104mV	0.062uA	1026mV	0.022uA
39	1115mV	0.067uA	1092mV	0.076uA
40	1122mV	0.063uA	1129mV	0.027uA
41	1005mV	0.060uA	1037mV	0.051uA
42	1106mV	0.051uA	1005mV	0.031uA
43	1018mV	0.080uA	1121mV	0.022uA
44	1021mV	0.041uA	1105mV	0.066uA
45	1103mV	0.063uA	1071mV	0.033uA
46	999mV	0.039uA	1098mV	0.047uA
47	1041mV	0.077uA	1092mV	0.054uA
48	1110mV	0.055uA	1033mV	0.076uA
49	1034mV	0.028uA	1032mV	0.045uA
50	1048mV	0.025uA	1058mV	0.073uA
51	1098mV	0.033uA	1104mV	0.057uA
52	1125mV	0.029uA	1077mV	0.047uA
53	1071mV	0.079uA	1024mV	0.054uA
54	1117mV	0.033uA	1028mV	0.045uA
55	1118mV	0.057uA	1050mV	0.041uA
56	1019mV	0.077uA	1055mV	0.060uA
57	1085mV	0.080uA	1094mV	0.077uA
58	998mV	0.066uA	1065mV	0.073uA
59	1129mV	0.079uA	1017mV	0.074uA
60	1043mV	0.070uA	1108mV	0.055uA

SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2013.10.17 ~ 2013.11.29
Test Standard : JESD22 STANDER Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
61	1084mV	0.027uA	1090mV	0.078uA
62	1077mV	0.035uA	1073mV	0.072uA
63	1088mV	0.046uA	1125mV	0.037uA
64	1110mV	0.066uA	1030mV	0.022uA
65	1026mV	0.056uA	1129mV	0.041uA
66	1068mV	0.041uA	1031mV	0.026uA
67	1057mV	0.037uA	1044mV	0.033uA
68	1090mV	0.053uA	1006mV	0.079uA
69	1107mV	0.053uA	1116mV	0.043uA
70	1083mV	0.086uA	1088mV	0.031uA
71	1074mV	0.049uA	1030mV	0.027uA
72	1109mV	0.044uA	1035mV	0.064uA
73	1091mV	0.028uA	1068mV	0.050uA
74	1101mV	0.051uA	1030mV	0.040uA
75	1067mV	0.029uA	1050mV	0.051uA
76	1035mV	0.060uA	1114mV	0.028uA
77	1093mV	0.033uA	1006mV	0.057uA

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temperature High Hum Reverse Bias Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 85±2℃, 85±5%RH, 80%VR, 1000Hrs
Test Date: 2013.10.02 ~ 2013.11.13
Test Standard : JESD22 STANDER Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1036mV	0.054uA	1095mV	0.082uA
2	1029mV	0.048uA	1033mV	0.064uA
3	1018mV	0.063uA	1059mV	0.035uA
4	1058mV	0.053uA	1012mV	0.047uA
5	1093mV	0.040uA	1002mV	0.053uA
6	1011mV	0.080uA	1126mV	0.073uA
7	1058mV	0.020uA	1103mV	0.023uA
8	1054mV	0.063uA	1102mV	0.045uA
9	1109mV	0.023uA	1094mV	0.066uA
10	1015mV	0.065uA	1001mV	0.037uA
11	1028mV	0.075uA	1012mV	0.028uA
12	1079mV	0.061uA	1018mV	0.050uA
13	1048mV	0.074uA	1074mV	0.032uA
14	1032mV	0.077uA	1110mV	0.081uA
15	1036mV	0.028uA	1034mV	0.058uA
16	1036mV	0.052uA	1020mV	0.081uA
17	1051mV	0.056uA	1125mV	0.048uA
18	1017mV	0.049uA	1020mV	0.056uA
19	1046mV	0.055uA	1002mV	0.075uA
20	1043mV	0.045uA	1061mV	0.034uA
21	1053mV	0.036uA	1051mV	0.041uA
22	1018mV	0.039uA	1054mV	0.037uA
23	1077mV	0.028uA	1005mV	0.086uA
24	1024mV	0.072uA	1003mV	0.076uA
25	1044mV	0.067uA	1079mV	0.051uA
26	1043mV	0.061uA	1050mV	0.057uA
27	1050mV	0.021uA	1100mV	0.080uA
28	1116mV	0.057uA	1007mV	0.076uA
29	1021mV	0.019uA	1053mV	0.067uA
30	1055mV	0.024uA	1027mV	0.021uA

SeCoS Corporation

High Temperature High Hum Reverse Bias Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 85±2℃, 85±5%RH, 80%VR, 1000Hrs
Test Date: 2013.10.02 ~ 2013.11.13
Test Standard : JESD22 STANDER Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
31	1013mV	0.066uA	1011mV	0.085uA
32	1049mV	0.046uA	1127mV	0.072uA
33	1058mV	0.043uA	1124mV	0.043uA
34	1121mV	0.052uA	1126mV	0.046uA
35	1079mV	0.044uA	1102mV	0.062uA
36	1116mV	0.027uA	1034mV	0.042uA
37	1116mV	0.060uA	1007mV	0.021uA
38	1072mV	0.037uA	1017mV	0.064uA
39	1088mV	0.059uA	1073mV	0.061uA
40	1081mV	0.029uA	1066mV	0.073uA
41	1046mV	0.026uA	1129mV	0.060uA
42	1102mV	0.074uA	1042mV	0.040uA
43	1098mV	0.065uA	1007mV	0.066uA
44	1108mV	0.036uA	1127mV	0.051uA
45	1008mV	0.064uA	1059mV	0.042uA
46	1104mV	0.039uA	1050mV	0.039uA
47	1129mV	0.041uA	1102mV	0.033uA
48	1002mV	0.043uA	1032mV	0.075uA
49	1079mV	0.038uA	1065mV	0.047uA
50	1042mV	0.061uA	1044mV	0.068uA
51	1024mV	0.063uA	1020mV	0.061uA
52	1110mV	0.051uA	1115mV	0.019uA
53	1008mV	0.052uA	1029mV	0.049uA
54	1080mV	0.048uA	1111mV	0.055uA
55	1010mV	0.063uA	1085mV	0.054uA
56	1078mV	0.050uA	1124mV	0.022uA
57	1105mV	0.064uA	1040mV	0.078uA
58	1106mV	0.071uA	1030mV	0.062uA
59	1114mV	0.039uA	1048mV	0.065uA
60	1088mV	0.028uA	1085mV	0.060uA

SeCoS Corporation

High Temperature High Hum Reverse Bias Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 85±2℃, 85±5%RH, 80%VR, 1000Hrs
Test Date: 2013.10.02 ~ 2013.11.13
Test Standard : JESD22 STANDER Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
61	1017mV	0.061uA	1005mV	0.039uA
62	1084mV	0.062uA	1006mV	0.023uA
63	1030mV	0.067uA	1032mV	0.045uA
64	1122mV	0.023uA	1101mV	0.039uA
65	1017mV	0.076uA	1071mV	0.046uA
66	1016mV	0.074uA	1011mV	0.038uA
67	1038mV	0.029uA	1111mV	0.060uA
68	1049mV	0.037uA	1007mV	0.021uA
69	1085mV	0.046uA	1015mV	0.062uA
70	1085mV	0.037uA	1055mV	0.049uA
71	1103mV	0.046uA	1051mV	0.065uA
72	1032mV	0.071uA	1057mV	0.084uA
73	1038mV	0.050uA	1085mV	0.058uA
74	1093mV	0.077uA	1044mV	0.055uA
75	1067mV	0.086uA	1118mV	0.080uA
76	1054mV	0.033uA	1029mV	0.031uA
77	1022mV	0.027uA	1017mV	0.067uA

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

Solderability Test Data

Report No : T131130-012
Part No : SUF16FL
Test Equipment: JUNO Test System DTS-1000
Test Condition : VF<1.3V@IF=1A, IR<5uA@VR=400V
Test Condition: 245℃ ± 5℃, 5Sec
Test Date: 2013.11.30 ~ 2013.11.30
Test Standard : JESD22 STANDER Method-B102
Operator: Leo Hsia

Test Result: PASS

	Before		After	
No	VF (mV)	IR (uA)	VF (mV)	IR (uA)
1	1069mV	0.065uA	1047mV	0.079uA
2	1011mV	0.024uA	1004mV	0.074uA
3	1069mV	0.020uA	1050mV	0.047uA
4	1076mV	0.060uA	1076mV	0.087uA
5	1044mV	0.046uA	1043mV	0.068uA
6	1032mV	0.073uA	1106mV	0.043uA
7	1004mV	0.030uA	1087mV	0.051uA
8	1117mV	0.048uA	1056mV	0.075uA
9	1110mV	0.078uA	1081mV	0.063uA
10	1047mV	0.024uA	1117mV	0.036uA

Made By: Leo Hsia

Approval: Peter Yang

Test Report

No. : CE/2013/A0292 Date : 2013/10/09 Page : 1 of 11

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

The following sample(s) was/were submitted and identified by/on behalf of the applicant as :

Sample Submitted By	:	EXCEL CELL ELECTRONIC CO., LTD.
Sample Description	:	C19210 COPPER
Sample Receiving Date	:	2013/10/02
Testing Period	:	2013/10/02 TO 2013/10/09

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Test Result(s) : Please refer to next page(s).

SGS TAIWAN LTD

Troy Chang / Manager-Tech
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

Test Result(s)

PART NAME No.1 : COPPER COLORED METAL

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	**	With reference to IEC 62321: 2008 and performed by Boiling water extraction Method.#	#	Negative
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α-HBCDD, β- HBCDD, γ- HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	mg/kg	With reference to IEC 62321: 2008 method. Analysis was performed by GC/MS.	5	n.d.
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

Test Item(s)	Unit	Method	MDL	Result
				No.1
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)			50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)			50	n.d.
Halogen-Iodine (I) (CAS No.: 14362-44-8)			50	n.d.

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Note：

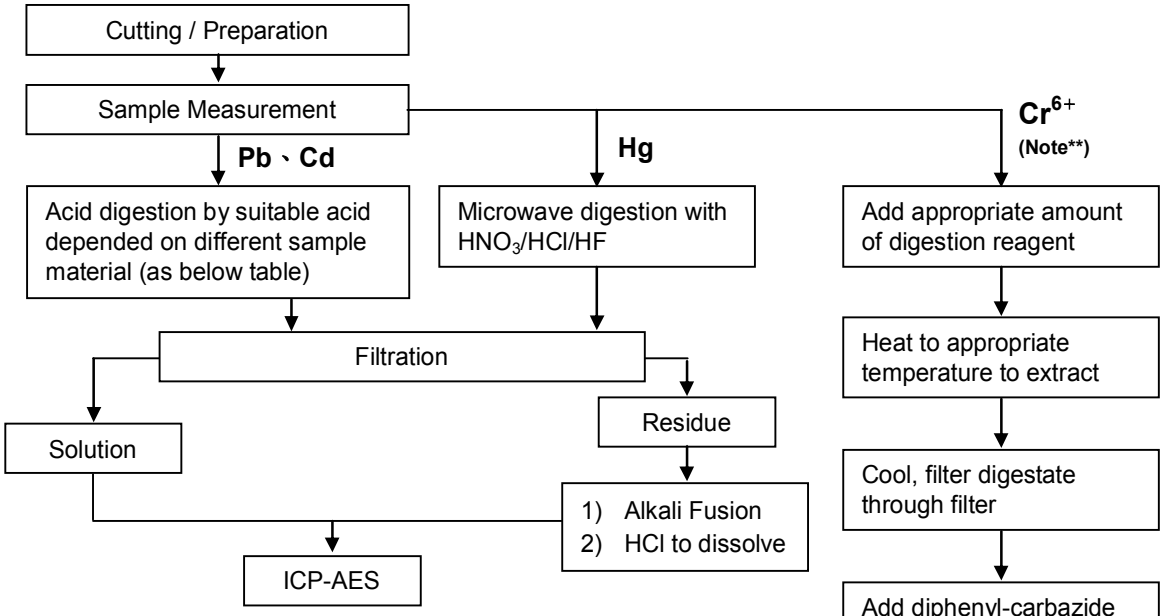
1. mg/kg = ppm；0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. ** = Qualitative analysis (No Unit)
6. # = a. Positive means the presence of CrVI on the tested areas
   b. Negative means the absence of CrVI on the tested areas
   The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² tested areas.

PFOS Reference Information : POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1μg/m².

EXCEL CELL ELECTRONIC CO., LTD.
NO. 23, 20 ROAD., TAICHUNG INDUSTRIAL PARK, TAICHUNG, TAIWAN 40850

1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
（Cr^{6+} test method excluded）
2) Name of the person who made measurement: Climbgreat Yang
3) Name of the person in charge of measurement: Troy Chang



Sample Material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO_3, HCl, HF, H_2O_2
Glass	HNO_3/HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO_3
Plastic	H_2SO_4, H_2O_2, HNO_3, HCl
Others	Added appropriate reagent to total digestion

Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 ℃.
(2) For metallic material, add pure water and heat to boiling .

EXCEL CELL ELECTRONIC CO., LTD.
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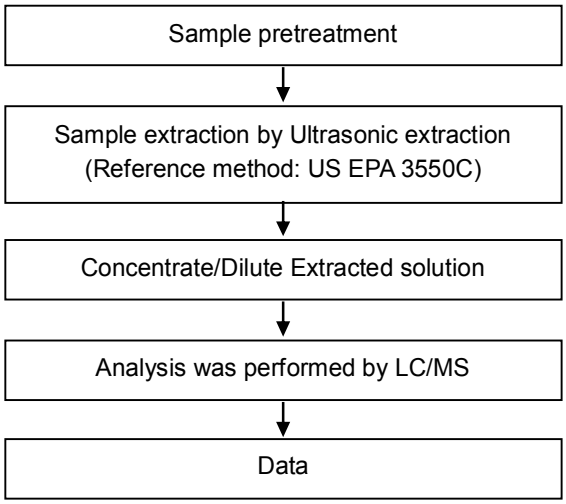
PFOA/PFOS analytical flow chart of Ultrasonic extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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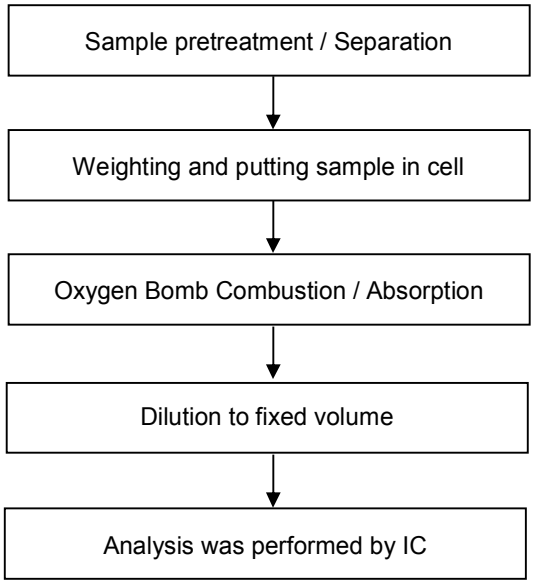
Analytical flow chart of halogen content

- Name of the person who made measurement: Rita Chen
- Name of the person in charge of measurement: Troy Chang



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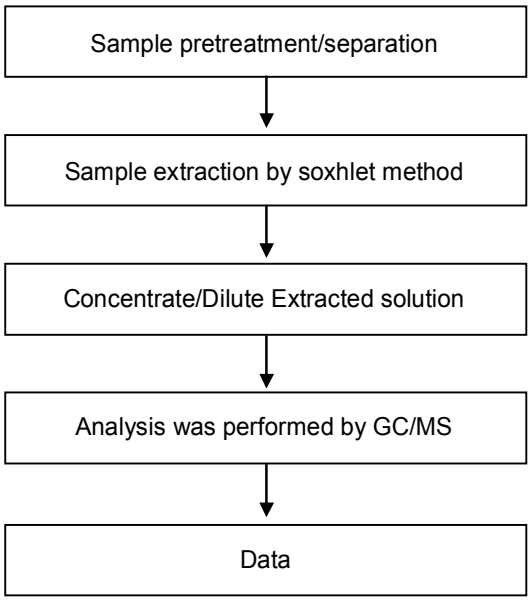
Analytical flow chart of phthalate content

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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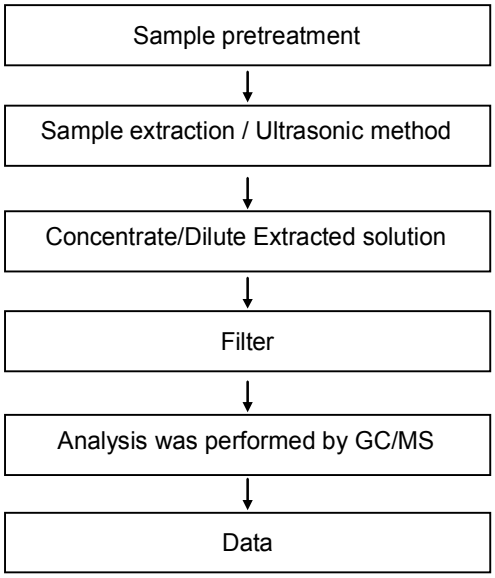
HBCDD analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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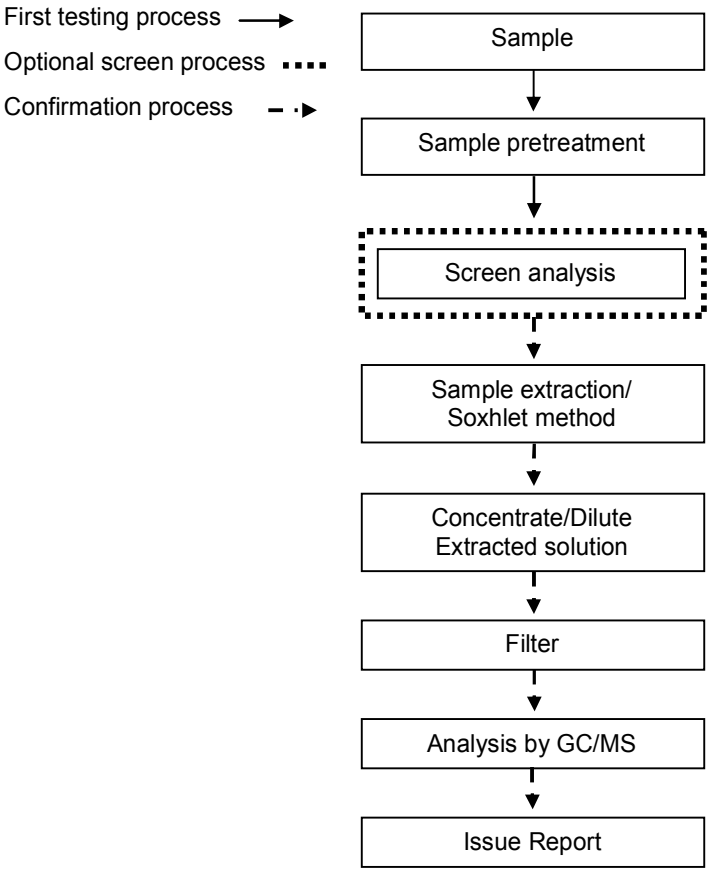
PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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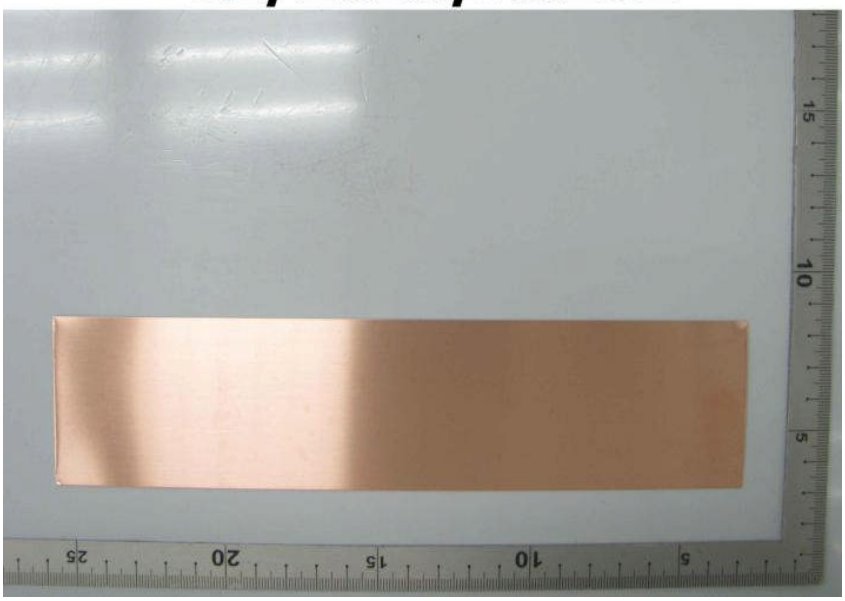
*** The tested sample / part is marked by an arrow if it's shown on the photo. ***

CE/2013/A0292



** End of Report **