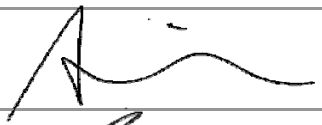
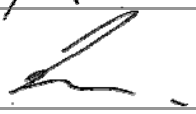
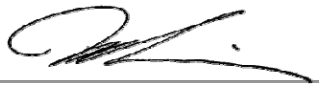
Headquarter Address:
8F.No.33, Lane 155, Sec.3, Bei-Shen Rd.,
Shen Keng Dist, New Taipei City, Taiwan
TEL: +886-2-26620988
FAX: +886-2-26620488

Product/Process Change Notification

PCN#	Effective Date	Issue Date
2014-08-01C-03	2015/2/1	2014/8/1
PCN Classification	Product Category	
Major	SC-59 Package	
Subject		
Add a molding vendor		
Affected Product(s)		
2SB1197K		
Description of Change(s)		
In order to avoid shortage of the material, and enhance the speed of delivery, thus, we add a new vendor.		
Content of Change(s)		
Add Molding vendor--ELER-8-100HFE		
Impact(s)		
N/A		
Attachment(s)		
Reliability Teat Report.		

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

For more information, please contact us directly or visit our website http://www.secosgmbh.com

SeCoS Corporation

Reliability Testing Summary Report

Date: 2014/06/30 Document No.: SH14 -06- 56

Test Item	P/N	Test Condition	(LTPD)	Sample Numbers	Allow Fall Numbers	Fall Numbers	Result
HTRB High Temp Reverse Bias	2SB1197K	100 ± 5℃, 80%VR, T = 1000hrs		77	0	0	ACC
HTSL High Temperature Storage Life	2SB1197K	150℃, T = 1000 hrs		77	0	0	ACC
PCT Pressure Cooker Test	2SB1197K	121℃, 29.7PSIG, 168 hrs		77	0	0	ACC
TCT Temperature Cycle Test	2SB1197K	-55℃/30min, 150℃/30min, For 1000 Cycle		77	0	0	ACC
THT High Temperature High Humidity Test	2SB1197K	85 ± 2℃, RH=85±5%, 1000 hrs		77	0	0	ACC
H3TRB High Temper High Humidity Reverse Bies Test	2SB1197K	85 ± 2℃, RH=85±5%, 1000 hrs		77	0	0	ACC
Solderability	2SB1197K	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: 2014.05.05 Testing End Date: 2014.06.30

Tester: Leo Hsia Approval: Peter Yang

SeCoS Corporation

Electrical Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 25℃
Test Date: 2014.05.05 ~ 2014.05.05
Test Standard : Specifications
Operator: Leo Hsia

Test Result: PASS

No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-45.30V	299.7	-136.0mV
2	-42.40V	281.9	-135.6mV
3	-42.40V	277.9	-141.9mV
4	-45.30V	315.9	-141.6mV
5	-42.50V	310.8	-136.3mV
6	-45.50V	301.9	-134.8mV
7	-45.20V	311.5	-134.2mV
8	-45.60V	276.2	-135.1mV
9	-43.10V	296.5	-131.5mV
10	-45.10V	311.2	-137.9mV
11	-43.00V	297.0	-131.1mV
12	-45.60V	307.6	-137.2mV
13	-44.00V	294.7	-132.8mV
14	-42.30V	315.9	-139.1mV
15	-42.50V	276.1	-138.5mV
16	-42.90V	289.2	-142.9mV
17	-43.70V	306.4	-134.4mV
18	-43.30V	315.8	-141.8mV
19	-45.60V	285.4	-131.9mV
20	-43.60V	304.2	-139.2mV
21	-46.60V	282.1	-132.2mV
22	-46.10V	282.9	-140.6mV
23	-44.00V	275.2	-132.4mV
24	-45.00V	300.2	-138.7mV
25	-45.50V	277.2	-132.2mV
26	-45.40V	290.6	-140.3mV
27	-44.50V	309.2	-140.1mV
28	-46.10V	314.5	-141.9mV
29	-43.30V	299.1	-139.7mV
30	-45.40V	319.1	-131.8mV
31	-43.20V	306.3	-139.3mV

SeCoS Corporation

Electrical Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 25℃
Test Date: 2014.05.05 ~ 2014.05.05
Test Standard : Specifications
Operator: Leo Hsia

Test Result: PASS

No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
32	-42.80V	317.0	-136.8mV
33	-43.20V	289.3	-137.3mV
34	-44.90V	283.2	-137.9mV
35	-46.50V	299.7	-141.6mV
36	-46.10V	297.9	-134.2mV
37	-44.50V	277.0	-132.1mV
38	-45.20V	300.3	-134.3mV
39	-44.20V	286.7	-132.2mV
40	-45.80V	316.0	-136.0mV
41	-42.90V	290.3	-134.7mV
42	-45.90V	310.3	-135.9mV
43	-42.30V	313.2	-138.0mV
44	-42.60V	308.8	-141.6mV
45	-43.60V	281.0	-139.4mV
46	-45.50V	292.8	-131.5mV
47	-42.90V	298.1	-139.7mV
48	-44.50V	293.3	-142.7mV
49	-45.10V	283.9	-132.4mV
50	-45.30V	279.9	-133.9mV
51	-43.90V	284.0	-133.2mV
52	-42.50V	275.7	-133.8mV
53	-45.50V	282.8	-142.1mV
54	-44.40V	279.2	-136.3mV
55	-43.50V	308.0	-141.5mV
56	-45.50V	307.1	-131.7mV
57	-45.40V	275.9	-133.9mV
58	-42.80V	281.3	-131.1mV
59	-42.60V	299.6	-141.6mV
60	-43.60V	299.3	-133.5mV
61	-43.50V	314.3	-139.0mV
62	-44.20V	308.2	-142.1mV

SeCoS Corporation

Electrical Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 25℃
Test Date: 2014.05.05 ~ 2014.05.05
Test Standard : Specifications
Operator: Leo Hsia

Test Result: PASS

No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
63	-42.90V	288.5	-134.7mV
64	-46.00V	284.1	-132.8mV
65	-44.80V	312.8	-134.5mV
66	-45.40V	287.5	-142.8mV
67	-46.60V	290.0	-139.0mV
68	-45.50V	298.2	-140.4mV
69	-42.80V	292.0	-132.5mV
70	-45.60V	284.7	-140.7mV
71	-42.60V	282.5	-134.4mV
72	-44.50V	306.4	-134.0mV
73	-46.20V	318.4	-136.8mV
74	-44.00V	304.8	-132.1mV
75	-43.20V	291.3	-135.8mV
76	-43.20V	279.6	-136.9mV
77	-43.40V	308.8	-140.7mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 100 ± 5℃, 80%VR, T = 1000 hrs
Test Date: 2014.05.05 ~ 2014.06.15
Test Standard : JESD22 STANDARD Method-A108
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-44.50V	293.4	-132.3mV	-46.40V	290.8	-137.6mV
2	-43.30V	304.8	-140.4mV	-45.30V	301.6	-139.9mV
3	-45.20V	285.9	-138.2mV	-43.60V	282.8	-132.7mV
4	-42.50V	278.2	-135.0mV	-45.70V	278.3	-141.6mV
5	-42.60V	309.3	-140.2mV	-45.20V	307.1	-134.0mV
6	-43.30V	294.8	-139.9mV	-45.20V	304.9	-134.3mV
7	-46.20V	312.7	-133.5mV	-42.30V	318.8	-131.0mV
8	-46.50V	297.7	-131.4mV	-42.60V	282.1	-131.1mV
9	-42.80V	285.5	-142.7mV	-44.10V	288.0	-141.8mV
10	-44.30V	310.7	-137.4mV	-44.30V	317.5	-141.2mV
11	-42.30V	308.0	-140.3mV	-45.30V	297.6	-141.8mV
12	-44.50V	291.1	-138.6mV	-44.20V	306.1	-140.6mV
13	-44.90V	304.5	-140.7mV	-45.10V	311.6	-133.2mV
14	-46.30V	292.1	-140.2mV	-44.50V	294.3	-137.5mV
15	-45.00V	295.4	-137.1mV	-43.50V	298.6	-134.5mV
16	-43.70V	296.2	-133.6mV	-43.00V	318.3	-138.6mV
17	-46.30V	282.2	-132.4mV	-42.80V	286.9	-133.2mV
18	-43.70V	295.4	-131.7mV	-44.50V	293.1	-137.1mV
19	-42.60V	293.6	-139.8mV	-43.90V	291.3	-137.8mV
20	-46.70V	282.3	-140.8mV	-42.80V	319.7	-142.2mV
21	-45.30V	277.2	-140.4mV	-46.60V	290.9	-142.3mV
22	-44.10V	319.4	-137.8mV	-45.90V	275.4	-140.2mV
23	-42.60V	317.9	-133.9mV	-45.80V	287.0	-140.1mV
24	-45.90V	297.8	-138.4mV	-46.30V	309.0	-141.5mV
25	-43.10V	281.6	-131.1mV	-45.20V	311.2	-136.7mV
26	-42.50V	310.8	-140.4mV	-43.50V	316.5	-136.4mV
27	-45.10V	277.8	-133.6mV	-42.50V	281.3	-139.6mV
28	-44.90V	314.8	-136.1mV	-45.30V	286.4	-137.3mV
29	-44.30V	301.9	-133.2mV	-42.30V	280.5	-133.5mV
30	-45.80V	314.0	-131.1mV	-42.60V	297.1	-132.2mV

SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 100 ± 5℃, 80%VR, T = 1000 hrs
Test Date: 2014.05.05 ~ 2014.06.15
Test Standard : JESD22 STANDARD Method-A108
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
31	-43.20V	302.5	-133.6mV	-42.90V	303.2	-132.9mV
32	-43.40V	281.2	-137.2mV	-46.30V	283.3	-136.4mV
33	-45.90V	288.1	-134.8mV	-46.30V	294.3	-137.0mV
34	-42.80V	315.1	-137.4mV	-44.80V	295.6	-135.1mV
35	-46.20V	312.1	-140.9mV	-43.40V	307.1	-141.9mV
36	-44.20V	298.8	-134.6mV	-46.40V	297.8	-132.8mV
37	-44.00V	298.1	-142.4mV	-44.60V	285.9	-139.7mV
38	-42.90V	307.8	-137.5mV	-46.50V	304.5	-132.9mV
39	-45.90V	291.8	-136.4mV	-46.20V	278.9	-133.1mV
40	-44.40V	307.5	-136.2mV	-43.70V	311.1	-138.3mV
41	-45.90V	296.7	-135.9mV	-43.90V	293.0	-136.8mV
42	-43.50V	303.2	-135.0mV	-45.00V	277.1	-138.8mV
43	-43.00V	314.6	-137.6mV	-43.20V	281.2	-142.7mV
44	-43.80V	319.0	-138.0mV	-43.10V	281.3	-137.9mV
45	-45.30V	311.4	-141.3mV	-42.30V	313.0	-133.0mV
46	-45.60V	310.3	-136.3mV	-44.60V	309.4	-133.9mV
47	-43.80V	281.4	-139.9mV	-45.60V	310.6	-133.9mV
48	-45.40V	307.1	-139.6mV	-43.90V	286.2	-142.6mV
49	-43.20V	317.5	-136.4mV	-42.60V	305.7	-135.9mV
50	-44.40V	289.6	-134.1mV	-45.90V	317.8	-135.1mV
51	-43.50V	292.8	-141.3mV	-43.80V	291.3	-131.8mV
52	-44.60V	318.7	-136.2mV	-46.30V	295.8	-135.0mV
53	-44.70V	305.1	-132.0mV	-43.70V	310.7	-136.5mV
54	-46.10V	292.8	-135.9mV	-42.60V	291.1	-134.5mV
55	-45.80V	315.5	-133.4mV	-42.70V	309.5	-137.1mV
56	-43.00V	315.1	-134.3mV	-43.30V	319.5	-140.4mV
57	-42.40V	317.3	-138.4mV	-43.50V	305.3	-136.1mV
58	-42.30V	282.3	-137.9mV	-45.30V	305.4	-132.4mV
59	-42.50V	312.2	-131.3mV	-42.70V	317.1	-135.8mV
60	-43.20V	298.2	-133.4mV	-44.30V	294.2	-142.0mV

SeCoS Corporation

High Temperature Reverse Bias Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 100 ± 5℃, 80%VR, T = 1000 hrs
Test Date: 2014.05.05 ~ 2014.06.15
Test Standard : JESD22 STANDARD Method-A108
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
61	-43.10V	297.0	-142.8mV	-42.80V	288.4	-134.9mV
62	-45.80V	296.6	-138.0mV	-44.70V	296.1	-140.4mV
63	-45.30V	277.8	-141.0mV	-45.40V	319.9	-135.6mV
64	-45.40V	312.5	-132.2mV	-44.30V	283.0	-140.3mV
65	-44.70V	308.5	-138.8mV	-42.40V	297.0	-137.0mV
66	-44.60V	294.6	-137.6mV	-44.20V	318.9	-135.1mV
67	-45.30V	289.4	-134.7mV	-45.40V	291.4	-136.9mV
68	-45.70V	286.5	-142.0mV	-42.60V	311.1	-136.6mV
69	-45.30V	318.6	-139.5mV	-44.70V	278.7	-138.0mV
70	-42.80V	286.2	-131.2mV	-42.70V	314.6	-138.1mV
71	-44.70V	310.4	-136.6mV	-45.00V	287.4	-135.3mV
72	-45.40V	289.1	-135.8mV	-46.30V	310.7	-131.1mV
73	-44.60V	293.2	-132.5mV	-42.60V	294.5	-138.8mV
74	-45.00V	300.7	-136.7mV	-46.20V	289.6	-138.2mV
75	-42.50V	277.7	-143.0mV	-45.00V	276.7	-140.0mV
76	-46.60V	303.5	-136.8mV	-42.40V	295.4	-134.8mV
77	-43.20V	290.5	-136.4mV	-46.40V	303.9	-136.5mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 150℃, 1000Hrs
Test Date: 2014.05.05 ~ 2014.06.15
Test Standard : JESD22 STANDARD Method-A103
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-43.00V	301.1	-136.6mV	-43.20V	300.8	-139.9mV
2	-45.90V	315.5	-142.1mV	-42.90V	295.9	-140.3mV
3	-44.60V	305.8	-137.7mV	-45.00V	304.0	-135.7mV
4	-46.20V	296.7	-133.0mV	-45.50V	296.7	-136.6mV
5	-44.30V	298.4	-131.5mV	-44.80V	314.5	-137.9mV
6	-42.70V	296.6	-141.4mV	-42.40V	295.2	-142.7mV
7	-45.90V	281.5	-142.1mV	-45.00V	316.6	-135.9mV
8	-42.90V	302.7	-141.3mV	-44.10V	298.8	-139.4mV
9	-43.50V	298.1	-135.8mV	-44.40V	303.8	-140.7mV
10	-46.50V	289.0	-132.6mV	-45.90V	300.7	-139.3mV
11	-45.30V	291.9	-142.3mV	-46.30V	318.3	-140.7mV
12	-46.70V	305.0	-134.8mV	-45.90V	292.5	-133.4mV
13	-43.30V	307.3	-139.2mV	-44.30V	291.3	-135.4mV
14	-43.00V	295.7	-136.9mV	-43.50V	283.6	-138.2mV
15	-43.60V	303.5	-133.0mV	-43.10V	304.9	-134.5mV
16	-44.50V	278.2	-139.5mV	-44.50V	301.8	-135.5mV
17	-44.40V	281.3	-131.7mV	-42.40V	283.1	-138.3mV
18	-44.90V	293.8	-134.8mV	-46.20V	289.7	-131.7mV
19	-42.40V	275.7	-141.4mV	-46.00V	286.3	-138.9mV
20	-45.10V	305.6	-134.0mV	-45.10V	294.1	-135.0mV
21	-43.50V	283.7	-135.5mV	-44.40V	316.3	-133.4mV
22	-42.80V	294.4	-136.9mV	-43.80V	286.3	-135.5mV
23	-42.60V	283.8	-133.4mV	-43.70V	302.0	-133.7mV
24	-45.60V	308.0	-136.6mV	-45.30V	281.8	-138.3mV
25	-43.00V	303.1	-131.0mV	-42.60V	314.1	-141.2mV
26	-46.10V	297.5	-136.4mV	-42.70V	303.5	-133.8mV
27	-45.20V	289.6	-137.7mV	-42.30V	306.2	-132.1mV
28	-43.30V	286.7	-133.8mV	-43.40V	298.6	-142.7mV
29	-46.10V	279.3	-132.9mV	-46.60V	311.0	-138.9mV
30	-42.50V	316.4	-133.3mV	-44.80V	317.7	-135.5mV

SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 150℃, 1000Hrs
Test Date: 2014.05.05 ~ 2014.06.15
Test Standard : JESD22 STANDARD Method-A103
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
31	-43.10V	308.9	-137.0mV	-43.90V	277.3	-136.0mV
32	-45.70V	307.4	-139.1mV	-46.40V	310.9	-131.1mV
33	-42.90V	282.3	-131.8mV	-44.20V	288.6	-137.7mV
34	-42.80V	282.9	-134.8mV	-42.30V	314.6	-139.8mV
35	-42.70V	299.5	-133.8mV	-43.40V	276.8	-139.1mV
36	-42.70V	282.8	-136.2mV	-43.30V	284.0	-141.9mV
37	-45.40V	292.6	-137.9mV	-43.20V	276.0	-132.4mV
38	-43.50V	277.6	-134.8mV	-44.30V	288.8	-131.3mV
39	-45.50V	299.3	-139.6mV	-44.00V	284.4	-135.6mV
40	-43.30V	293.3	-131.8mV	-43.10V	277.9	-138.1mV
41	-43.70V	294.2	-136.0mV	-43.60V	293.0	-134.5mV
42	-43.40V	288.2	-133.4mV	-44.10V	297.8	-131.8mV
43	-43.20V	306.4	-135.2mV	-43.30V	298.2	-131.3mV
44	-42.30V	278.6	-142.8mV	-45.20V	318.5	-140.8mV
45	-43.70V	319.0	-136.3mV	-43.50V	319.8	-142.0mV
46	-43.10V	282.9	-141.7mV	-44.60V	282.5	-139.5mV
47	-46.60V	311.6	-139.5mV	-45.40V	317.6	-135.0mV
48	-42.60V	288.1	-136.1mV	-44.20V	288.3	-132.1mV
49	-45.50V	317.5	-137.6mV	-43.10V	288.3	-140.8mV
50	-44.50V	318.0	-138.5mV	-44.60V	318.5	-135.5mV
51	-43.40V	300.1	-140.1mV	-42.70V	305.2	-133.2mV
52	-42.80V	298.5	-142.5mV	-45.80V	315.5	-132.6mV
53	-42.80V	282.0	-132.8mV	-46.30V	298.9	-138.0mV
54	-43.80V	310.2	-131.3mV	-42.50V	286.6	-142.5mV
55	-43.10V	295.6	-141.5mV	-46.50V	307.0	-139.4mV
56	-45.70V	290.0	-132.3mV	-42.80V	300.1	-135.7mV
57	-45.60V	312.6	-142.4mV	-45.00V	289.3	-140.1mV
58	-42.80V	296.0	-137.7mV	-45.20V	297.3	-139.9mV
59	-46.30V	278.0	-138.6mV	-44.20V	313.1	-134.9mV
60	-45.40V	310.8	-132.3mV	-44.10V	316.4	-136.5mV

SeCoS Corporation

High Temperature Storage Life Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 150℃, 1000Hrs
Test Date: 2014.05.05 ~ 2014.06.15
Test Standard : JESD22 STANDARD Method-A103
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
61	-43.20V	295.3	-141.5mV	-44.00V	304.2	-135.6mV
62	-46.50V	276.7	-137.2mV	-46.10V	291.3	-131.6mV
63	-45.70V	279.4	-139.8mV	-46.10V	315.3	-138.1mV
64	-43.30V	319.2	-132.1mV	-46.50V	294.2	-141.0mV
65	-42.90V	291.8	-135.1mV	-44.20V	311.6	-136.1mV
66	-44.10V	300.7	-133.2mV	-45.90V	286.7	-136.8mV
67	-46.40V	291.2	-133.6mV	-45.10V	294.3	-142.0mV
68	-42.30V	298.8	-131.0mV	-45.80V	283.6	-137.1mV
69	-44.60V	316.9	-131.5mV	-44.70V	289.7	-131.1mV
70	-43.00V	304.0	-142.1mV	-46.00V	314.8	-134.4mV
71	-43.20V	299.8	-140.0mV	-43.10V	288.8	-136.8mV
72	-44.00V	306.7	-133.5mV	-46.00V	278.2	-132.0mV
73	-45.50V	285.5	-133.2mV	-43.20V	313.6	-131.8mV
74	-44.40V	304.6	-138.7mV	-46.40V	303.0	-134.1mV
75	-45.10V	276.8	-140.5mV	-45.80V	291.4	-137.5mV
76	-43.80V	282.5	-130.9mV	-44.50V	282.6	-131.3mV
77	-43.30V	290.1	-135.5mV	-46.50V	289.2	-134.5mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

Pressure Cooker Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 121℃, 100%RH, 29.7PSIG, 168Hrs
Test Date: 2014.05.05 ~ 2014.05.11
Test Standard : JESD22 STANDARD Method-A102
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-46.10V	278.9	-138.6mV	-42.70V	283.7	-138.5mV
2	-42.40V	291.1	-136.4mV	-46.50V	283.0	-131.4mV
3	-43.00V	312.6	-141.3mV	-43.10V	318.6	-138.3mV
4	-46.00V	309.8	-133.9mV	-42.30V	318.7	-132.8mV
5	-43.60V	285.6	-137.3mV	-46.50V	287.4	-139.7mV
6	-43.20V	316.5	-139.2mV	-42.70V	306.6	-132.0mV
7	-45.80V	311.5	-142.5mV	-43.80V	287.0	-134.6mV
8	-44.10V	308.1	-140.7mV	-45.40V	281.7	-138.4mV
9	-43.70V	283.3	-139.8mV	-45.50V	317.0	-133.5mV
10	-45.10V	315.1	-135.5mV	-46.40V	276.8	-139.7mV
11	-43.50V	313.9	-141.5mV	-44.20V	309.0	-142.2mV
12	-43.70V	294.4	-136.7mV	-45.30V	318.3	-133.4mV
13	-46.10V	296.6	-136.5mV	-44.00V	316.3	-134.9mV
14	-44.90V	295.2	-133.2mV	-42.60V	296.2	-140.1mV
15	-45.30V	307.3	-139.4mV	-46.50V	300.4	-132.7mV
16	-42.60V	319.1	-133.9mV	-43.50V	291.2	-142.1mV
17	-45.80V	293.2	-138.0mV	-44.80V	281.9	-139.6mV
18	-45.10V	305.9	-139.7mV	-45.40V	299.7	-140.3mV
19	-43.80V	311.7	-140.1mV	-45.20V	289.5	-134.3mV
20	-44.20V	284.2	-133.5mV	-44.50V	280.9	-131.8mV
21	-45.10V	288.5	-136.8mV	-46.70V	313.5	-133.2mV
22	-46.40V	285.4	-133.8mV	-44.70V	291.6	-134.6mV
23	-43.50V	306.9	-136.2mV	-42.50V	294.6	-131.1mV
24	-46.20V	290.1	-133.1mV	-43.00V	308.9	-142.6mV
25	-43.20V	313.0	-138.8mV	-45.80V	305.9	-133.7mV
26	-46.20V	286.7	-138.2mV	-42.40V	312.5	-134.5mV
27	-42.90V	296.3	-142.1mV	-42.60V	291.3	-137.5mV
28	-45.70V	304.5	-138.6mV	-42.40V	304.4	-137.5mV
29	-46.10V	311.2	-133.4mV	-44.40V	299.9	-136.7mV
30	-43.10V	291.4	-138.1mV	-43.50V	290.5	-131.5mV

SeCoS Corporation

Pressure Cooker Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 121℃, 100%RH, 29.7PSIG, 168Hrs
Test Date: 2014.05.05 ~ 2014.05.11
Test Standard : JESD22 STANDARD Method-A102
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
31	-46.30V	297.1	-140.7mV	-46.60V	284.9	-142.5mV
32	-43.30V	294.9	-138.3mV	-44.00V	300.5	-132.7mV
33	-44.10V	312.8	-131.0mV	-43.40V	288.9	-131.2mV
34	-45.00V	312.7	-131.8mV	-42.70V	291.2	-140.3mV
35	-46.20V	288.5	-135.6mV	-43.30V	286.6	-133.9mV
36	-43.50V	314.6	-133.3mV	-43.70V	318.9	-134.7mV
37	-45.60V	283.6	-139.9mV	-45.00V	304.2	-142.8mV
38	-46.30V	279.4	-141.2mV	-44.70V	319.8	-136.8mV
39	-46.10V	318.5	-135.1mV	-43.30V	300.7	-131.1mV
40	-42.60V	292.9	-141.8mV	-46.50V	297.7	-131.5mV
41	-45.30V	299.3	-137.2mV	-45.30V	286.4	-133.6mV
42	-46.60V	293.0	-135.0mV	-45.20V	291.5	-135.2mV
43	-44.00V	297.9	-132.4mV	-45.50V	312.1	-138.4mV
44	-45.80V	319.2	-141.8mV	-46.50V	316.1	-135.8mV
45	-45.90V	311.5	-138.0mV	-42.40V	288.7	-134.9mV
46	-42.60V	280.2	-138.5mV	-44.90V	293.9	-135.4mV
47	-45.20V	317.8	-140.0mV	-44.30V	314.8	-136.9mV
48	-45.00V	292.1	-139.4mV	-42.40V	286.3	-138.2mV
49	-44.30V	303.0	-131.0mV	-46.40V	292.3	-134.8mV
50	-42.40V	299.4	-136.4mV	-44.80V	304.4	-135.5mV
51	-42.40V	285.1	-139.4mV	-44.30V	285.6	-132.9mV
52	-43.30V	284.3	-134.0mV	-43.20V	281.9	-142.3mV
53	-45.80V	291.7	-142.4mV	-45.50V	308.2	-135.9mV
54	-43.20V	290.5	-135.7mV	-46.20V	317.2	-133.3mV
55	-46.50V	285.0	-137.7mV	-45.50V	293.4	-135.3mV
56	-46.40V	294.6	-132.1mV	-46.10V	316.3	-141.6mV
57	-43.40V	299.3	-133.3mV	-44.90V	276.8	-135.8mV
58	-46.40V	280.5	-142.5mV	-45.40V	289.8	-138.6mV
59	-45.20V	295.3	-136.8mV	-45.70V	280.9	-139.6mV
60	-43.40V	296.1	-133.9mV	-45.00V	314.9	-142.4mV

SeCoS Corporation

Pressure Cooker Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 121℃, 100%RH, 29.7PSIG, 168Hrs
Test Date: 2014.05.05 ~ 2014.05.11
Test Standard : JESD22 STANDARD Method-A102
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
61	-44.00V	304.7	-139.3mV	-43.20V	308.0	-133.4mV
62	-42.60V	316.7	-137.5mV	-46.10V	286.3	-138.2mV
63	-44.50V	318.3	-136.0mV	-42.80V	314.1	-134.0mV
64	-42.60V	297.4	-131.3mV	-45.60V	288.4	-141.4mV
65	-45.00V	315.3	-138.6mV	-43.80V	286.4	-142.9mV
66	-46.40V	317.4	-133.0mV	-46.60V	307.5	-134.0mV
67	-43.70V	290.5	-136.2mV	-42.60V	291.0	-142.3mV
68	-45.70V	315.0	-140.9mV	-46.40V	300.5	-134.0mV
69	-43.90V	284.9	-138.1mV	-42.60V	288.6	-136.8mV
70	-42.80V	293.9	-141.3mV	-46.50V	300.7	-141.1mV
71	-44.00V	277.6	-137.0mV	-45.20V	299.0	-141.9mV
72	-46.10V	308.4	-131.2mV	-46.40V	277.2	-134.0mV
73	-42.50V	305.6	-143.0mV	-44.20V	301.0	-135.3mV
74	-43.10V	293.9	-137.2mV	-45.00V	282.4	-136.1mV
75	-45.70V	318.8	-131.9mV	-42.80V	311.2	-136.9mV
76	-43.60V	318.6	-131.2mV	-44.00V	319.1	-138.7mV
77	-44.70V	309.5	-141.0mV	-43.20V	317.4	-134.3mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

Temperature Cycle Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: -55℃/30min, 150℃/30min, for1000 Cycle
Test Date: 2014.05.05 ~ 2014.06.25
Test Standard : JESD22 STANDARD Method-A104
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-45.80V	277.9	-142.7mV	-44.30V	311.5	-142.2mV
2	-46.50V	280.0	-141.3mV	-45.00V	286.2	-139.1mV
3	-44.00V	291.8	-142.6mV	-43.80V	299.3	-137.7mV
4	-42.60V	280.2	-133.7mV	-43.80V	309.0	-141.5mV
5	-43.30V	283.1	-141.5mV	-46.00V	290.3	-132.0mV
6	-44.00V	313.6	-137.0mV	-46.40V	287.3	-138.6mV
7	-44.10V	308.7	-139.7mV	-43.00V	304.2	-142.1mV
8	-44.00V	303.4	-131.5mV	-44.10V	300.2	-138.5mV
9	-44.60V	296.8	-137.1mV	-43.10V	293.5	-141.2mV
10	-44.20V	279.2	-134.7mV	-45.50V	289.2	-142.1mV
11	-43.90V	318.2	-134.5mV	-46.10V	303.7	-136.7mV
12	-42.40V	282.7	-135.3mV	-42.40V	298.4	-142.1mV
13	-46.50V	291.5	-136.9mV	-43.90V	279.0	-134.4mV
14	-45.70V	278.0	-139.0mV	-46.50V	288.6	-137.7mV
15	-43.30V	305.8	-140.3mV	-45.80V	301.8	-135.7mV
16	-46.40V	284.9	-138.7mV	-42.90V	316.3	-132.1mV
17	-44.90V	298.8	-133.3mV	-44.80V	304.6	-131.1mV
18	-44.00V	289.0	-136.2mV	-43.90V	313.7	-134.6mV
19	-43.40V	286.2	-139.0mV	-46.70V	306.1	-136.9mV
20	-44.40V	298.2	-140.0mV	-46.10V	300.1	-133.9mV
21	-42.40V	302.1	-137.8mV	-46.40V	293.0	-134.4mV
22	-46.50V	298.3	-132.6mV	-43.20V	317.8	-133.4mV
23	-46.00V	295.9	-139.8mV	-43.50V	312.2	-133.5mV
24	-45.30V	287.9	-136.8mV	-45.60V	314.1	-138.7mV
25	-44.30V	315.6	-139.0mV	-43.00V	316.1	-132.3mV
26	-45.60V	289.6	-139.4mV	-43.40V	307.6	-139.5mV
27	-46.40V	299.3	-138.7mV	-42.50V	288.1	-135.0mV
28	-45.50V	288.9	-141.5mV	-44.90V	305.0	-140.9mV
29	-44.00V	282.9	-133.8mV	-46.60V	292.1	-134.5mV
30	-45.60V	313.2	-131.1mV	-46.00V	300.1	-142.7mV

SeCoS Corporation

Temperature Cycle Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: -55℃/30min, 150℃/30min, for1000 Cycle
Test Date: 2014.05.05 ~ 2014.06.25
Test Standard : JESD22 STANDARD Method-A104
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
31	-46.50V	312.6	-136.1mV	-45.00V	316.9	-137.4mV
32	-46.30V	294.8	-137.4mV	-45.60V	314.7	-136.1mV
33	-42.90V	291.5	-141.8mV	-45.60V	304.7	-139.3mV
34	-42.80V	277.2	-137.9mV	-43.80V	310.9	-131.4mV
35	-44.60V	304.1	-140.6mV	-46.10V	315.3	-137.0mV
36	-46.20V	302.9	-132.5mV	-45.80V	311.8	-142.3mV
37	-46.10V	315.5	-141.9mV	-43.60V	285.5	-134.8mV
38	-42.90V	286.4	-139.7mV	-43.30V	284.1	-136.0mV
39	-44.50V	292.1	-140.8mV	-46.10V	319.6	-139.2mV
40	-44.70V	312.5	-131.3mV	-42.30V	298.1	-140.8mV
41	-43.20V	303.6	-137.9mV	-45.70V	300.4	-135.3mV
42	-42.90V	277.0	-140.9mV	-46.20V	303.7	-132.2mV
43	-46.50V	305.4	-134.9mV	-45.70V	287.7	-132.2mV
44	-42.30V	305.3	-132.8mV	-42.90V	315.4	-139.4mV
45	-42.40V	277.0	-131.4mV	-45.50V	289.8	-140.4mV
46	-45.10V	316.2	-135.1mV	-44.30V	279.2	-142.9mV
47	-44.00V	309.3	-135.5mV	-46.60V	294.6	-135.8mV
48	-43.20V	316.5	-131.0mV	-43.50V	305.7	-140.5mV
49	-46.40V	294.8	-133.5mV	-44.40V	305.9	-139.1mV
50	-44.10V	294.9	-138.6mV	-42.30V	278.3	-138.1mV
51	-43.90V	277.6	-142.7mV	-43.80V	284.0	-133.8mV
52	-42.90V	314.8	-134.9mV	-43.50V	311.1	-137.8mV
53	-45.30V	318.6	-132.0mV	-43.40V	278.2	-139.6mV
54	-42.80V	291.9	-133.2mV	-43.90V	315.2	-134.8mV
55	-43.90V	293.7	-137.0mV	-43.10V	311.3	-140.3mV
56	-42.60V	316.2	-134.8mV	-44.90V	279.6	-135.8mV
57	-43.10V	279.8	-138.8mV	-45.40V	292.1	-136.8mV
58	-43.40V	276.1	-136.9mV	-43.10V	305.0	-134.7mV
59	-46.60V	293.3	-132.7mV	-43.00V	308.2	-133.6mV
60	-45.90V	291.1	-141.5mV	-46.00V	291.0	-139.8mV

SeCoS Corporation

Temperature Cycle Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: -55℃/30min, 150℃/30min, for1000 Cycle
Test Date: 2014.05.05 ~ 2014.06.25
Test Standard : JESD22 STANDARD Method-A104
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
61	-45.30V	302.2	-138.7mV	-42.60V	306.6	-139.8mV
62	-43.20V	299.7	-132.2mV	-44.20V	276.7	-139.1mV
63	-42.80V	315.5	-132.2mV	-44.80V	294.1	-141.0mV
64	-46.50V	294.5	-142.2mV	-42.60V	299.7	-138.9mV
65	-45.00V	313.0	-137.9mV	-42.60V	319.6	-133.2mV
66	-43.40V	288.6	-134.9mV	-43.60V	282.4	-131.4mV
67	-45.30V	277.8	-139.7mV	-42.40V	282.6	-138.7mV
68	-46.40V	314.2	-137.2mV	-42.50V	297.1	-139.8mV
69	-44.90V	296.6	-133.8mV	-45.80V	296.2	-131.3mV
70	-43.80V	316.1	-142.5mV	-46.30V	285.4	-131.2mV
71	-44.20V	282.3	-137.1mV	-46.20V	279.0	-142.8mV
72	-46.40V	299.5	-141.4mV	-44.30V	318.7	-142.7mV
73	-45.20V	319.3	-135.0mV	-46.10V	303.0	-141.0mV
74	-44.70V	319.9	-134.5mV	-46.10V	297.3	-138.7mV
75	-46.00V	297.1	-138.5mV	-44.20V	311.7	-131.7mV
76	-44.60V	279.1	-137.2mV	-44.00V	278.9	-132.7mV
77	-45.60V	275.5	-139.9mV	-44.80V	289.0	-141.7mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2014.05.11 ~ 2014.06.23
Test Standard : JESD22 STANDARD Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-46.20V	277.4	-136.3mV	-42.70V	275.3	-138.4mV
2	-44.50V	309.4	-139.1mV	-42.40V	312.4	-135.6mV
3	-45.70V	307.4	-136.3mV	-44.00V	302.7	-135.3mV
4	-42.30V	277.8	-132.8mV	-42.80V	276.6	-142.7mV
5	-43.80V	285.0	-136.5mV	-44.00V	275.6	-138.7mV
6	-43.10V	283.0	-131.5mV	-44.50V	277.1	-138.7mV
7	-46.20V	315.3	-133.5mV	-44.60V	283.5	-142.6mV
8	-44.30V	284.3	-131.2mV	-43.40V	318.7	-135.6mV
9	-43.30V	318.5	-135.4mV	-43.60V	304.0	-132.3mV
10	-45.80V	276.2	-135.8mV	-42.70V	278.3	-136.5mV
11	-44.50V	317.8	-134.9mV	-44.60V	294.7	-132.8mV
12	-44.30V	285.6	-140.6mV	-45.20V	294.0	-140.1mV
13	-42.80V	292.2	-131.5mV	-44.40V	283.3	-133.1mV
14	-45.80V	318.7	-135.9mV	-44.00V	287.1	-137.8mV
15	-45.80V	303.2	-141.3mV	-42.60V	286.0	-139.6mV
16	-42.70V	287.3	-139.7mV	-42.70V	299.6	-141.4mV
17	-46.30V	291.9	-132.6mV	-45.20V	295.4	-141.4mV
18	-42.50V	296.0	-141.3mV	-45.90V	316.5	-138.8mV
19	-43.90V	314.9	-131.5mV	-45.60V	304.5	-135.6mV
20	-44.30V	279.2	-141.4mV	-44.10V	314.8	-140.4mV
21	-43.40V	279.2	-141.9mV	-43.20V	304.2	-132.8mV
22	-42.30V	280.5	-133.1mV	-43.40V	296.8	-139.0mV
23	-46.30V	305.7	-131.5mV	-44.80V	298.7	-132.0mV
24	-42.50V	302.1	-134.0mV	-45.70V	302.0	-135.0mV
25	-46.40V	294.7	-134.8mV	-43.80V	285.4	-140.2mV
26	-45.50V	313.1	-132.0mV	-43.20V	294.6	-135.4mV
27	-46.10V	287.0	-139.9mV	-42.30V	289.2	-140.9mV
28	-44.80V	300.4	-136.0mV	-44.80V	295.8	-132.5mV
29	-44.30V	315.2	-137.0mV	-44.70V	300.5	-136.9mV
30	-46.40V	286.2	-141.2mV	-45.00V	305.1	-135.8mV

SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2014.05.11 ~ 2014.06.23
Test Standard : JESD22 STANDARD Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
31	-45.60V	303.1	-136.2mV	-46.30V	278.9	-131.9mV
32	-43.90V	307.3	-137.2mV	-45.70V	318.2	-135.4mV
33	-42.90V	286.3	-133.4mV	-46.50V	317.9	-133.4mV
34	-42.70V	286.0	-137.7mV	-45.10V	307.1	-133.9mV
35	-43.30V	317.3	-132.2mV	-42.50V	281.7	-138.3mV
36	-44.20V	316.2	-134.7mV	-43.40V	291.4	-132.2mV
37	-45.10V	281.6	-135.4mV	-45.10V	292.0	-131.0mV
38	-45.90V	308.8	-135.2mV	-42.60V	311.2	-134.5mV
39	-44.50V	288.8	-142.5mV	-46.40V	275.2	-140.2mV
40	-43.60V	284.2	-134.3mV	-44.40V	308.7	-142.5mV
41	-42.30V	309.1	-132.1mV	-43.60V	296.8	-140.7mV
42	-43.70V	278.5	-132.8mV	-44.50V	281.5	-138.9mV
43	-43.80V	307.7	-140.8mV	-46.60V	317.8	-141.7mV
44	-43.80V	289.7	-131.1mV	-46.30V	293.4	-138.1mV
45	-43.40V	287.0	-133.4mV	-42.40V	316.3	-131.2mV
46	-45.90V	316.0	-135.7mV	-44.30V	316.1	-139.6mV
47	-45.80V	287.1	-132.4mV	-46.70V	291.0	-131.7mV
48	-43.80V	319.4	-141.5mV	-46.50V	292.6	-134.8mV
49	-44.60V	276.1	-142.5mV	-46.40V	280.2	-142.3mV
50	-44.80V	291.8	-138.9mV	-45.20V	311.0	-139.8mV
51	-44.80V	296.3	-132.7mV	-44.10V	297.0	-131.1mV
52	-46.20V	308.4	-138.3mV	-45.00V	311.2	-137.1mV
53	-45.20V	299.3	-137.8mV	-44.00V	320.0	-141.9mV
54	-45.40V	308.2	-139.8mV	-42.80V	301.1	-141.6mV
55	-43.10V	290.1	-139.4mV	-44.20V	315.3	-134.2mV
56	-43.60V	305.9	-140.2mV	-43.10V	282.9	-131.2mV
57	-45.30V	316.4	-131.0mV	-44.70V	281.1	-141.5mV
58	-43.90V	303.0	-136.9mV	-43.10V	302.8	-137.2mV
59	-44.70V	313.5	-132.8mV	-45.50V	275.7	-132.0mV
60	-45.20V	292.1	-133.5mV	-45.10V	318.0	-139.7mV

SeCoS Corporation

High Temperature High Humidity Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2014.05.11 ~ 2014.06.23
Test Standard : JESD22 STANDARD Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
61	-42.50V	281.8	-136.8mV	-42.30V	297.3	-132.7mV
62	-45.00V	296.6	-131.2mV	-42.70V	300.9	-135.8mV
63	-44.40V	299.0	-131.8mV	-46.50V	305.3	-142.4mV
64	-45.40V	277.3	-134.4mV	-44.20V	307.7	-132.6mV
65	-45.10V	319.8	-134.6mV	-45.90V	313.3	-131.6mV
66	-42.70V	297.1	-133.9mV	-42.50V	301.7	-136.5mV
67	-45.50V	290.7	-132.3mV	-42.50V	311.5	-132.4mV
68	-42.80V	296.2	-131.6mV	-46.20V	287.1	-137.1mV
69	-43.50V	306.1	-137.8mV	-42.30V	299.5	-136.5mV
70	-45.30V	314.8	-137.6mV	-45.80V	310.8	-135.1mV
71	-45.80V	315.5	-131.7mV	-45.20V	276.4	-133.0mV
72	-46.60V	309.9	-142.5mV	-45.20V	275.6	-132.6mV
73	-43.90V	298.3	-132.3mV	-44.60V	285.7	-141.9mV
74	-44.80V	287.0	-140.4mV	-45.60V	304.9	-136.2mV
75	-44.30V	291.0	-136.7mV	-43.30V	319.6	-142.2mV
76	-43.00V	300.8	-133.7mV	-43.90V	275.3	-136.6mV
77	-43.30V	298.6	-141.9mV	-43.40V	307.1	-132.4mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

High Temper High Humidity Reverse Bies Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2014.05.11 ~ 2014.06.23
Test Standard : JESD22 STANDARD Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-43.20V	280.7	-134.9mV	-46.60V	316.3	-131.6mV
2	-45.70V	283.7	-132.0mV	-44.20V	314.1	-133.0mV
3	-43.80V	292.7	-141.2mV	-46.00V	282.5	-137.9mV
4	-42.80V	275.8	-139.4mV	-43.10V	318.6	-131.0mV
5	-44.40V	278.3	-140.5mV	-45.60V	290.5	-142.4mV
6	-43.00V	295.6	-137.7mV	-43.50V	315.0	-131.7mV
7	-43.70V	304.2	-139.9mV	-43.40V	281.5	-137.4mV
8	-45.80V	291.5	-131.5mV	-45.20V	296.8	-137.6mV
9	-43.40V	290.5	-139.3mV	-45.10V	295.7	-132.9mV
10	-42.70V	288.1	-142.2mV	-45.90V	318.7	-139.9mV
11	-44.90V	277.0	-131.0mV	-43.60V	279.3	-134.3mV
12	-43.10V	315.7	-139.0mV	-46.10V	308.7	-137.2mV
13	-42.70V	276.4	-142.3mV	-46.20V	282.4	-131.0mV
14	-45.20V	300.5	-135.5mV	-42.80V	302.8	-139.6mV
15	-42.40V	282.0	-134.7mV	-45.00V	305.0	-142.7mV
16	-44.50V	283.8	-131.1mV	-46.20V	311.7	-139.9mV
17	-46.00V	275.4	-133.3mV	-42.50V	296.1	-142.7mV
18	-45.10V	310.6	-139.7mV	-44.40V	291.3	-138.2mV
19	-46.70V	276.2	-135.9mV	-43.10V	318.2	-140.1mV
20	-44.80V	291.9	-134.6mV	-45.50V	285.6	-137.3mV
21	-45.50V	282.1	-136.5mV	-45.90V	284.1	-137.4mV
22	-46.00V	315.4	-137.7mV	-43.30V	295.0	-138.1mV
23	-44.40V	313.6	-140.1mV	-42.40V	314.4	-132.4mV
24	-46.20V	312.7	-131.6mV	-44.60V	284.5	-141.6mV
25	-43.40V	298.8	-136.8mV	-44.50V	313.1	-143.0mV
26	-46.60V	316.5	-131.9mV	-45.00V	289.8	-132.9mV
27	-42.90V	315.1	-137.0mV	-45.70V	315.6	-131.1mV
28	-46.40V	282.2	-136.3mV	-42.70V	294.4	-138.5mV
29	-45.00V	299.3	-137.6mV	-43.50V	318.8	-132.6mV
30	-43.80V	300.9	-143.0mV	-45.20V	290.4	-142.5mV

SeCoS Corporation

High Temper High Humidity Reverse Bies Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2014.05.11 ~ 2014.06.23
Test Standard : JESD22 STANDARD Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
31	-43.50V	319.9	-135.2mV	-43.20V	301.6	-137.5mV
32	-45.20V	279.0	-141.2mV	-44.40V	296.5	-134.1mV
33	-46.40V	292.5	-139.9mV	-42.30V	319.2	-133.4mV
34	-46.30V	286.8	-136.8mV	-46.10V	287.1	-138.4mV
35	-42.70V	293.2	-135.3mV	-44.20V	304.3	-132.0mV
36	-44.80V	314.1	-136.1mV	-44.80V	318.0	-138.1mV
37	-42.30V	292.3	-132.1mV	-46.40V	294.8	-139.0mV
38	-45.10V	288.3	-135.7mV	-43.30V	313.7	-136.9mV
39	-44.50V	307.6	-140.8mV	-45.90V	301.0	-132.5mV
40	-42.60V	306.5	-135.1mV	-43.80V	318.9	-142.1mV
41	-43.00V	302.0	-133.8mV	-45.40V	308.1	-131.9mV
42	-43.60V	312.4	-135.3mV	-43.40V	304.4	-136.2mV
43	-43.30V	285.0	-131.0mV	-45.60V	308.1	-133.8mV
44	-43.30V	318.3	-137.4mV	-45.00V	302.6	-131.7mV
45	-42.70V	314.2	-142.2mV	-43.50V	281.5	-131.0mV
46	-43.50V	277.0	-136.3mV	-42.70V	296.9	-133.6mV
47	-43.30V	287.5	-135.1mV	-45.50V	314.3	-141.2mV
48	-46.30V	284.6	-141.9mV	-45.30V	292.8	-132.6mV
49	-43.40V	289.0	-132.8mV	-42.30V	303.8	-136.8mV
50	-43.80V	305.3	-136.6mV	-44.20V	293.3	-137.6mV
51	-46.10V	300.4	-141.2mV	-46.50V	304.6	-133.2mV
52	-43.10V	304.7	-136.6mV	-43.50V	302.0	-138.0mV
53	-44.80V	305.0	-131.2mV	-44.60V	283.6	-138.0mV
54	-43.10V	277.9	-140.6mV	-46.50V	276.8	-141.4mV
55	-45.70V	294.0	-141.0mV	-46.60V	306.3	-140.5mV
56	-44.00V	276.9	-131.2mV	-44.30V	286.5	-139.3mV
57	-42.50V	317.8	-131.9mV	-42.50V	276.0	-137.9mV
58	-42.90V	302.0	-135.9mV	-42.40V	294.5	-139.8mV
59	-45.70V	313.5	-139.8mV	-43.80V	306.4	-137.7mV
60	-42.60V	304.8	-140.4mV	-46.40V	288.3	-139.8mV

SeCoS Corporation

High Temper High Humidity Reverse Bies Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 85±2℃, 85±5%RH, 1000Hrs
Test Date: 2014.05.11 ~ 2014.06.23
Test Standard : JESD22 STANDARD Method-A101
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
61	-45.20V	301.4	-139.9mV	-46.60V	309.4	-132.4mV
62	-43.70V	300.2	-136.3mV	-46.50V	303.8	-140.3mV
63	-44.60V	295.4	-142.6mV	-44.00V	284.1	-141.4mV
64	-45.80V	291.2	-141.5mV	-46.50V	301.0	-138.7mV
65	-43.10V	281.9	-133.6mV	-45.60V	298.2	-141.9mV
66	-44.10V	277.1	-132.6mV	-44.40V	284.2	-141.2mV
67	-45.60V	284.3	-142.5mV	-42.70V	319.4	-131.1mV
68	-44.20V	284.3	-135.5mV	-46.50V	287.5	-134.3mV
69	-45.00V	292.2	-134.2mV	-46.00V	290.1	-131.9mV
70	-45.90V	304.5	-135.3mV	-42.40V	288.7	-132.9mV
71	-42.80V	279.0	-137.1mV	-44.40V	278.0	-134.4mV
72	-42.50V	313.5	-132.3mV	-44.20V	309.5	-136.5mV
73	-43.60V	296.8	-139.1mV	-43.20V	308.6	-142.1mV
74	-42.70V	297.8	-133.5mV	-43.70V	318.4	-132.3mV
75	-45.70V	308.5	-134.1mV	-46.20V	304.9	-134.9mV
76	-42.90V	293.6	-139.7mV	-46.10V	306.4	-138.6mV
77	-45.70V	286.2	-133.1mV	-44.60V	317.1	-133.0mV

Made By: Leo Hsia

Approval: Peter Yang

SeCoS Corporation

Solderability Test Data

Report No : T140630-056
Part No : 2SB1197K
Test Equipment: JUNO Test System DTS-1000
Test Condition : V(BR)CEO > -32V, 120 < HFE < 390, VCE(sat) < -500mV
Test Condition: 245℃ ± 5℃, 5Sec
Test Date: 2014.06.28 ~ 2014.06.28
Test Standard : JESD22 STANDER Method-B102
Operator: Leo Hsia

Test Result: PASS

	Before			After		
No	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)	$V_{(BR)CEO}$ (V)	h_{FE}	$V_{CE(sat)}$ (mV)
1	-42.50V	310.5	-139.9mV	-43.90V	286.7	-132.3mV
2	-43.00V	292.3	-139.6mV	-44.20V	288.6	-140.6mV
3	-44.50V	279.2	-137.5mV	-45.50V	279.4	-131.0mV
4	-43.70V	291.3	-138.5mV	-44.90V	293.7	-142.9mV
5	-46.20V	304.2	-140.1mV	-45.70V	284.8	-131.8mV
6	-44.20V	297.7	-138.1mV	-45.30V	279.5	-139.9mV
7	-46.60V	294.9	-136.5mV	-44.10V	308.3	-141.6mV
8	-45.40V	285.1	-141.3mV	-43.90V	306.1	-137.9mV
9	-46.40V	292.6	-134.1mV	-43.10V	307.2	-140.0mV
10	-46.40V	286.3	-140.9mV	-46.50V	298.1	-139.8mV

Made By: Leo Hsia

Approval: Peter Yang