


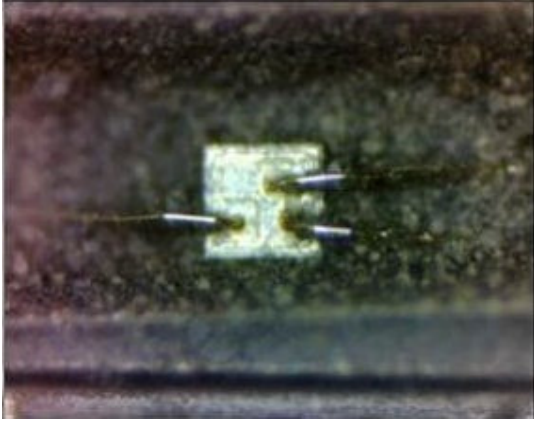
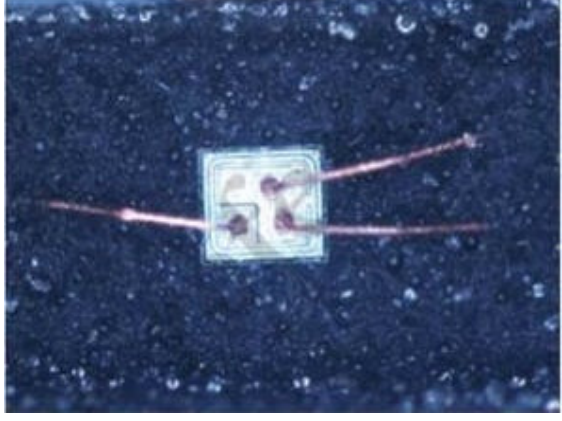


## Product/Process Change Notification

PCN#	Effective Date	Issued Date
2015-05-01C-01	2015/11/1	2015/5/1
PCN Classification	Product Category	
Major	SMS318	
Subject		
Enhance electrical characteristics and increase capacity.		
Affected Product(s)		
SMS318		
Description of Change(s)		
Comparing with AgPdAu wires, AuPdCu wires have lower electrical resisting conductivity with improved thermal performance and can help to reduce the defects such as broken wire.		
Content of Change(s)		
Previous wire bonding: AgPdAu wire 20um*3 Present wire bonding: AuPdCu wire 22um*3		
Impact(s)		
N/A		
Attachment(s)		
Reliability Teat Report. SGS Report		

Approval		
Issued 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>

Exterior Comparison Chart	
Original	Modified
	
Inner View	Inner View



## Reliability Testing Summary Report

Date: 2015/04/30

Document No.: SI15 -04- 10

Test Item	P/N	Test Condition	(LTPD)	Sample Numbers	Allow Fall Numbers	Fall Numbers	Result
HTRB High Temp Reverse Bias	SMS318	150 ± 5°C, 80% VR, T = 1000hrs		77	0	0	ACC
HTSL High Temperature Storage Life	SMS318	150°C, T = 1000 hrs		77	0	0	ACC
PCT Pressure Cooker Test	SMS318	121°C, 29.7PSIG, 168 hrs		77	0	0	ACC
TCT Temperature Cycle Test	SMS318	-55°C/30min, 150°C/30min, For 1000 Cycle		77	0	0	ACC
THT High Temperature High Humidity Test	SMS318	85 ± 2°C, RH=85±5%, 1000 hrs		77	0	0	ACC
H3TRB High Temper High Humidity Reverse Bies Test	SMS318	85 ± 2°C, RH=85±5%, 80% VR, 1000 hrs		77	0	0	ACC
Solderability	SMS318	245 ± 5°C, 5Sec the inspected area of each lead must have 95% solder coverage minimum		10	0	0	ACC

**Judgment:**

qualified     unqualified

Testing Start Date: 2015.03.02    Testing End Date: 2015.04.30

Tester: King Huang    Approval: Peter Yang



## Electrical Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V

RDS(ON) < 3.5  $\Omega$  @VGS=10V, ID=220mA

Test Condition: 25 $^{\circ}$ C

Test Date: 2015.03.02

Test Standard : Specifications

Operator: Leo Hsia

Test Result: PASS

No	V(BR)DSS	IDSS	RDS(ON)
1	79.73V	0.002 $\mu$ A	2.53m $\Omega$
2	81.54V	0.003 $\mu$ A	1.78m $\Omega$
3	80.79V	0.003 $\mu$ A	2.00m $\Omega$
4	80.82V	0.003 $\mu$ A	2.49m $\Omega$
5	80.54V	0.004 $\mu$ A	2.14m $\Omega$
6	79.74V	0.002 $\mu$ A	2.19m $\Omega$
7	81.52V	0.003 $\mu$ A	1.87m $\Omega$
8	79.91V	0.001 $\mu$ A	2.54m $\Omega$
9	80.09V	0.002 $\mu$ A	1.47m $\Omega$
10	79.61V	0.001 $\mu$ A	2.01m $\Omega$
11	80.18V	0.005 $\mu$ A	1.78m $\Omega$
12	79.45V	0.001 $\mu$ A	2.32m $\Omega$
13	81.09V	0.005 $\mu$ A	1.73m $\Omega$
13	81.46V	0.002 $\mu$ A	2.50m $\Omega$
15	80.71V	0.004 $\mu$ A	2.49m $\Omega$
16	80.89V	0.001 $\mu$ A	1.52m $\Omega$
17	80.04V	0.005 $\mu$ A	2.22m $\Omega$
18	79.72V	0.001 $\mu$ A	2.32m $\Omega$
19	80.88V	0.003 $\mu$ A	1.85m $\Omega$
20	79.65V	0.005 $\mu$ A	1.70m $\Omega$
21	79.74V	0.001 $\mu$ A	1.67m $\Omega$
22	79.90V	0.003 $\mu$ A	1.57m $\Omega$
23	79.82V	0.004 $\mu$ A	2.29m $\Omega$
24	81.38V	0.004 $\mu$ A	2.07m $\Omega$
25	80.69V	0.002 $\mu$ A	1.94m $\Omega$
26	80.50V	0.004 $\mu$ A	1.56m $\Omega$
27	81.04V	0.001 $\mu$ A	1.92m $\Omega$
28	81.53V	0.004 $\mu$ A	2.41m $\Omega$
29	80.16V	0.002 $\mu$ A	1.49m $\Omega$
30	81.31V	0.003 $\mu$ A	2.10m $\Omega$



## Electrical Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V

RDS(ON) < 3.5  $\Omega$  @VGS=10V, ID=220mA

Test Condition: 25 $^{\circ}$ C

Test Date: 2015.03.02

Test Standard : Specifications

Operator: Leo Hsia

Test Result: PASS

No	V(BR)DSS	IDSS	RDS(ON)
31	80.60V	0.004 $\mu$ A	2.28m $\Omega$
32	80.00V	0.003 $\mu$ A	2.05m $\Omega$
33	79.78V	0.004 $\mu$ A	1.72m $\Omega$
34	81.00V	0.005 $\mu$ A	1.95m $\Omega$
35	81.37V	0.004 $\mu$ A	1.90m $\Omega$
36	80.02V	0.005 $\mu$ A	1.47m $\Omega$
37	80.28V	0.001 $\mu$ A	2.22m $\Omega$
38	79.47V	0.003 $\mu$ A	1.78m $\Omega$
39	79.47V	0.002 $\mu$ A	2.07m $\Omega$
40	80.94V	0.001 $\mu$ A	1.60m $\Omega$
41	81.16V	0.002 $\mu$ A	1.66m $\Omega$
42	79.73V	0.002 $\mu$ A	2.58m $\Omega$
43	80.35V	0.004 $\mu$ A	1.79m $\Omega$
44	81.34V	0.003 $\mu$ A	1.76m $\Omega$
45	80.52V	0.002 $\mu$ A	2.47m $\Omega$
46	80.64V	0.003 $\mu$ A	2.24m $\Omega$
47	80.13V	0.004 $\mu$ A	1.77m $\Omega$
48	79.76V	0.004 $\mu$ A	2.40m $\Omega$
49	80.49V	0.003 $\mu$ A	1.87m $\Omega$
50	79.58V	0.002 $\mu$ A	1.78m $\Omega$
51	79.51V	0.004 $\mu$ A	2.08m $\Omega$
52	80.74V	0.002 $\mu$ A	1.89m $\Omega$
53	81.54V	0.004 $\mu$ A	1.94m $\Omega$
54	80.56V	0.002 $\mu$ A	2.39m $\Omega$
55	80.10V	0.005 $\mu$ A	1.76m $\Omega$
56	81.40V	0.004 $\mu$ A	1.73m $\Omega$
57	81.32V	0.004 $\mu$ A	1.83m $\Omega$
58	81.49V	0.001 $\mu$ A	1.83m $\Omega$
59	80.77V	0.002 $\mu$ A	1.55m $\Omega$
60	80.49V	0.002 $\mu$ A	1.78m $\Omega$



## Electrical Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V

RDS(ON) < 3.5  $\Omega$  @VGS=10V, ID=220mA

Test Condition: 25 $^{\circ}$ C

Test Date: 2015.03.02

Test Standard : Specifications

Operator: Leo Hsia

Test Result: PASS

No	V(BR)DSS	IDSS	RDS(ON)
61	80.33V	0.004 $\mu$ A	1.63m $\Omega$
62	79.85V	0.001 $\mu$ A	1.50m $\Omega$
63	79.79V	0.004 $\mu$ A	2.24m $\Omega$
64	81.05V	0.004 $\mu$ A	2.16m $\Omega$
65	80.65V	0.003 $\mu$ A	2.25m $\Omega$
66	80.78V	0.003 $\mu$ A	1.47m $\Omega$
67	81.27V	0.002 $\mu$ A	1.98m $\Omega$
68	80.64V	0.003 $\mu$ A	1.57m $\Omega$
69	80.79V	0.003 $\mu$ A	2.16m $\Omega$
70	81.56V	0.005 $\mu$ A	1.89m $\Omega$
71	80.17V	0.003 $\mu$ A	1.68m $\Omega$
72	81.27V	0.004 $\mu$ A	1.91m $\Omega$
73	80.56V	0.002 $\mu$ A	2.58m $\Omega$
74	81.16V	0.004 $\mu$ A	1.78m $\Omega$
75	80.03V	0.003 $\mu$ A	2.12m $\Omega$
76	80.86V	0.005 $\mu$ A	1.87m $\Omega$
77	80.39V	0.003 $\mu$ A	2.34m $\Omega$

Made By: King Huang

Approval: Peter Yang



## High Temperature Reverse Bias Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V

RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 150 ± 5°C , 80% VR, T = 1000 hrs

Test Date: 2015.03.02 ~ 2015.04.12

Test Standard : JESD22 STANDARD Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
1	79.55V	0.003uA	1.65mΩ	80.00V	0.003uA	2.29mΩ
2	80.22V	0.002uA	1.58mΩ	79.81V	0.003uA	1.80mΩ
3	81.20V	0.002uA	2.14mΩ	80.54V	0.004uA	1.46mΩ
4	80.02V	0.003uA	1.85mΩ	79.82V	0.004uA	2.14mΩ
5	79.81V	0.004uA	2.08mΩ	80.46V	0.004uA	1.79mΩ
6	81.00V	0.002uA	2.29mΩ	79.52V	0.003uA	2.01mΩ
7	79.90V	0.001uA	1.92mΩ	80.76V	0.004uA	1.49mΩ
8	80.19V	0.001uA	2.08mΩ	81.03V	0.003uA	2.45mΩ
9	79.79V	0.001uA	1.45mΩ	81.02V	0.003uA	2.09mΩ
10	79.95V	0.003uA	2.42mΩ	80.90V	0.005uA	1.95mΩ
11	79.80V	0.003uA	2.08mΩ	80.79V	0.004uA	1.88mΩ
12	79.52V	0.003uA	2.32mΩ	80.57V	0.004uA	1.50mΩ
13	80.99V	0.002uA	1.75mΩ	81.56V	0.001uA	1.90mΩ
13	79.96V	0.002uA	2.09mΩ	79.88V	0.005uA	1.58mΩ
15	80.12V	0.002uA	2.20mΩ	80.17V	0.003uA	1.48mΩ
16	80.59V	0.002uA	1.73mΩ	81.28V	0.002uA	2.41mΩ
17	81.05V	0.004uA	1.53mΩ	79.76V	0.004uA	1.87mΩ
18	80.82V	0.004uA	2.15mΩ	79.64V	0.004uA	1.56mΩ
19	81.27V	0.002uA	2.03mΩ	81.35V	0.001uA	2.55mΩ
20	80.95V	0.005uA	2.02mΩ	81.47V	0.003uA	2.41mΩ
21	80.49V	0.005uA	1.90mΩ	80.65V	0.003uA	2.06mΩ
22	80.05V	0.002uA	1.50mΩ	79.54V	0.005uA	1.91mΩ
23	80.55V	0.004uA	1.84mΩ	79.47V	0.002uA	1.91mΩ
24	81.07V	0.002uA	1.89mΩ	79.73V	0.003uA	1.77mΩ
25	80.78V	0.003uA	1.61mΩ	80.86V	0.003uA	2.55mΩ
26	81.06V	0.004uA	1.56mΩ	80.58V	0.003uA	1.52mΩ
27	81.50V	0.003uA	2.09mΩ	79.95V	0.004uA	1.55mΩ
28	80.44V	0.003uA	2.41mΩ	81.41V	0.003uA	2.18mΩ
29	81.10V	0.002uA	1.81mΩ	79.81V	0.004uA	1.74mΩ



## High Temperature Reverse Bias Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V  
RDS(ON) < 3.5 $\Omega$ @VGS=10V, ID=220mA

Test Condition: 150  $\pm$  5 $^{\circ}$ C , 80% VR, T = 1000 hrs

Test Date: 2015.03.02 ~ 2015.04.12

Test Standard : JESD22 STANDARD Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
30	80.19V	0.004 $\mu$ A	1.89m $\Omega$	79.57V	0.002 $\mu$ A	1.45m $\Omega$
31	81.51V	0.004 $\mu$ A	2.05m $\Omega$	80.56V	0.003 $\mu$ A	2.30m $\Omega$
32	80.20V	0.002 $\mu$ A	1.62m $\Omega$	80.64V	0.002 $\mu$ A	1.47m $\Omega$
33	80.61V	0.002 $\mu$ A	1.82m $\Omega$	79.86V	0.005 $\mu$ A	2.54m $\Omega$
34	79.67V	0.004 $\mu$ A	1.47m $\Omega$	79.54V	0.001 $\mu$ A	1.88m $\Omega$
35	80.85V	0.004 $\mu$ A	1.59m $\Omega$	81.25V	0.005 $\mu$ A	1.76m $\Omega$
36	80.42V	0.002 $\mu$ A	1.72m $\Omega$	81.54V	0.005 $\mu$ A	1.89m $\Omega$
37	80.95V	0.002 $\mu$ A	1.85m $\Omega$	79.99V	0.002 $\mu$ A	2.16m $\Omega$
38	79.52V	0.004 $\mu$ A	1.49m $\Omega$	79.86V	0.001 $\mu$ A	2.18m $\Omega$
39	80.63V	0.004 $\mu$ A	1.98m $\Omega$	80.27V	0.003 $\mu$ A	1.68m $\Omega$
40	79.81V	0.004 $\mu$ A	1.94m $\Omega$	80.41V	0.004 $\mu$ A	2.12m $\Omega$
41	79.52V	0.002 $\mu$ A	1.72m $\Omega$	81.20V	0.003 $\mu$ A	1.86m $\Omega$
42	79.80V	0.004 $\mu$ A	1.95m $\Omega$	81.55V	0.004 $\mu$ A	2.44m $\Omega$
43	80.50V	0.004 $\mu$ A	1.75m $\Omega$	79.99V	0.002 $\mu$ A	1.65m $\Omega$
44	80.97V	0.001 $\mu$ A	2.18m $\Omega$	80.60V	0.003 $\mu$ A	2.23m $\Omega$
45	79.49V	0.005 $\mu$ A	2.34m $\Omega$	80.77V	0.003 $\mu$ A	1.55m $\Omega$
46	80.79V	0.004 $\mu$ A	1.93m $\Omega$	80.31V	0.004 $\mu$ A	1.54m $\Omega$
47	81.14V	0.002 $\mu$ A	1.58m $\Omega$	81.07V	0.004 $\mu$ A	1.74m $\Omega$
48	80.77V	0.004 $\mu$ A	2.37m $\Omega$	81.03V	0.004 $\mu$ A	2.17m $\Omega$
49	80.19V	0.001 $\mu$ A	2.47m $\Omega$	80.43V	0.003 $\mu$ A	1.71m $\Omega$
50	80.50V	0.002 $\mu$ A	1.90m $\Omega$	79.47V	0.002 $\mu$ A	1.69m $\Omega$
51	80.59V	0.004 $\mu$ A	2.10m $\Omega$	79.50V	0.003 $\mu$ A	1.81m $\Omega$
52	80.62V	0.002 $\mu$ A	2.18m $\Omega$	81.24V	0.005 $\mu$ A	1.67m $\Omega$
53	80.51V	0.002 $\mu$ A	2.17m $\Omega$	80.07V	0.001 $\mu$ A	1.67m $\Omega$
54	79.76V	0.003 $\mu$ A	1.85m $\Omega$	81.35V	0.004 $\mu$ A	2.54m $\Omega$
55	80.90V	0.003 $\mu$ A	1.93m $\Omega$	80.12V	0.001 $\mu$ A	2.38m $\Omega$
56	80.88V	0.004 $\mu$ A	2.26m $\Omega$	80.20V	0.005 $\mu$ A	2.30m $\Omega$
57	81.10V	0.002 $\mu$ A	1.70m $\Omega$	80.44V	0.005 $\mu$ A	1.54m $\Omega$
58	80.78V	0.004 $\mu$ A	1.53m $\Omega$	79.95V	0.005 $\mu$ A	2.55m $\Omega$





## High Temperature Reverse Bias Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V  
RDS(ON) < 3.5 $\Omega$ @VGS=10V, ID=220mA

Test Condition: 150  $\pm$  5 $^{\circ}$ C , 80% VR, T = 1000 hrs

Test Date: 2015.03.02 ~ 2015.04.12

Test Standard : JESD22 STANDARD Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
59	81.54V	0.001 $\mu$ A	1.68m $\Omega$	81.48V	0.001 $\mu$ A	2.56m $\Omega$
60	80.17V	0.005 $\mu$ A	1.90m $\Omega$	81.26V	0.002 $\mu$ A	2.56m $\Omega$
61	79.70V	0.004 $\mu$ A	2.48m $\Omega$	80.06V	0.002 $\mu$ A	2.00m $\Omega$
62	80.38V	0.004 $\mu$ A	2.52m $\Omega$	79.67V	0.002 $\mu$ A	1.45m $\Omega$
63	79.73V	0.002 $\mu$ A	2.43m $\Omega$	79.68V	0.004 $\mu$ A	2.10m $\Omega$
64	81.39V	0.003 $\mu$ A	2.14m $\Omega$	80.32V	0.003 $\mu$ A	2.35m $\Omega$
65	80.72V	0.004 $\mu$ A	1.88m $\Omega$	81.46V	0.002 $\mu$ A	1.68m $\Omega$
66	81.55V	0.003 $\mu$ A	2.08m $\Omega$	81.20V	0.003 $\mu$ A	1.77m $\Omega$
67	81.41V	0.004 $\mu$ A	1.74m $\Omega$	80.11V	0.002 $\mu$ A	1.81m $\Omega$
68	80.88V	0.005 $\mu$ A	1.46m $\Omega$	81.54V	0.005 $\mu$ A	1.70m $\Omega$
69	80.65V	0.005 $\mu$ A	2.02m $\Omega$	80.87V	0.002 $\mu$ A	2.32m $\Omega$
70	81.46V	0.002 $\mu$ A	2.03m $\Omega$	80.86V	0.003 $\mu$ A	1.83m $\Omega$
71	80.45V	0.004 $\mu$ A	2.46m $\Omega$	80.29V	0.004 $\mu$ A	1.47m $\Omega$
72	81.38V	0.001 $\mu$ A	2.15m $\Omega$	80.73V	0.002 $\mu$ A	2.34m $\Omega$
73	80.78V	0.004 $\mu$ A	2.26m $\Omega$	80.12V	0.004 $\mu$ A	2.19m $\Omega$
74	79.57V	0.003 $\mu$ A	2.00m $\Omega$	80.86V	0.004 $\mu$ A	1.92m $\Omega$
75	80.28V	0.001 $\mu$ A	1.82m $\Omega$	80.70V	0.005 $\mu$ A	1.80m $\Omega$
76	81.59V	0.003 $\mu$ A	2.26m $\Omega$	80.58V	0.001 $\mu$ A	2.09m $\Omega$
77	80.44V	0.001 $\mu$ A	2.26m $\Omega$	80.62V	0.002 $\mu$ A	2.28m $\Omega$

Made By: King Huang

Approval: Peter Yang



## High Temperature Storage Life Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 150°C, 1000Hrs

Test Date: 2015.03.02 ~ 2015.04.12

Test Standard : JESD22 STANDARD Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
1	81.28V	0.003uA	2.50mΩ	80.45V	0.001uA	2.35mΩ
2	79.67V	0.003uA	2.19mΩ	79.96V	0.003uA	1.77mΩ
3	80.24V	0.003uA	2.19mΩ	80.10V	0.003uA	2.21mΩ
4	79.72V	0.003uA	1.70mΩ	80.52V	0.001uA	2.43mΩ
5	79.50V	0.004uA	2.30mΩ	80.00V	0.004uA	2.47mΩ
6	80.53V	0.003uA	1.80mΩ	81.32V	0.003uA	1.74mΩ
7	80.96V	0.003uA	1.97mΩ	81.49V	0.002uA	1.68mΩ
8	79.90V	0.003uA	2.20mΩ	81.41V	0.002uA	2.39mΩ
9	80.65V	0.001uA	2.19mΩ	81.38V	0.002uA	1.50mΩ
10	81.46V	0.004uA	2.51mΩ	80.38V	0.003uA	1.87mΩ
11	80.31V	0.004uA	2.32mΩ	81.10V	0.002uA	2.38mΩ
12	81.19V	0.003uA	2.17mΩ	79.86V	0.003uA	1.89mΩ
13	81.17V	0.004uA	2.58mΩ	79.72V	0.004uA	1.67mΩ
13	79.82V	0.003uA	2.18mΩ	79.55V	0.004uA	1.65mΩ
15	81.27V	0.002uA	1.76mΩ	81.33V	0.004uA	1.98mΩ
16	80.03V	0.002uA	1.87mΩ	80.25V	0.003uA	1.91mΩ
17	81.25V	0.005uA	2.57mΩ	81.44V	0.003uA	2.01mΩ
18	81.36V	0.003uA	1.94mΩ	79.94V	0.003uA	2.21mΩ
19	80.75V	0.003uA	1.91mΩ	81.11V	0.004uA	1.47mΩ
20	81.50V	0.003uA	2.23mΩ	81.56V	0.003uA	2.45mΩ
21	79.91V	0.001uA	2.39mΩ	81.48V	0.004uA	1.57mΩ
22	81.02V	0.001uA	2.01mΩ	81.28V	0.004uA	1.91mΩ
23	80.06V	0.001uA	2.46mΩ	79.86V	0.003uA	1.53mΩ
24	81.17V	0.003uA	2.39mΩ	80.23V	0.003uA	1.97mΩ
25	80.67V	0.002uA	2.53mΩ	79.56V	0.003uA	1.58mΩ
26	80.29V	0.005uA	1.81mΩ	80.36V	0.003uA	1.75mΩ
27	80.16V	0.002uA	2.05mΩ	79.94V	0.005uA	2.49mΩ
28	80.44V	0.003uA	1.52mΩ	81.35V	0.004uA	1.79mΩ
29	81.01V	0.001uA	2.53mΩ	80.74V	0.003uA	1.58mΩ



## High Temperature Storage Life Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V  
RDS(ON) < 3.5 $\Omega$ @VGS=10V, ID=220mA

Test Condition: 150 $^{\circ}$ C , 1000Hrs

Test Date: 2015.03.02 ~ 2015.04.12

Test Standard : JESD22 STANDARD Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
30	79.86V	0.004 $\mu$ A	2.41m $\Omega$	79.68V	0.002 $\mu$ A	1.80m $\Omega$
31	79.48V	0.001 $\mu$ A	1.70m $\Omega$	80.84V	0.004 $\mu$ A	2.18m $\Omega$
32	80.30V	0.003 $\mu$ A	1.52m $\Omega$	79.52V	0.002 $\mu$ A	2.05m $\Omega$
33	80.24V	0.002 $\mu$ A	1.82m $\Omega$	81.40V	0.002 $\mu$ A	1.56m $\Omega$
34	81.22V	0.003 $\mu$ A	1.49m $\Omega$	81.50V	0.001 $\mu$ A	2.22m $\Omega$
35	80.96V	0.003 $\mu$ A	1.94m $\Omega$	80.55V	0.005 $\mu$ A	1.67m $\Omega$
36	79.77V	0.004 $\mu$ A	1.72m $\Omega$	80.67V	0.003 $\mu$ A	1.85m $\Omega$
37	80.11V	0.002 $\mu$ A	1.84m $\Omega$	79.83V	0.002 $\mu$ A	2.48m $\Omega$
38	81.25V	0.004 $\mu$ A	1.86m $\Omega$	80.20V	0.003 $\mu$ A	1.77m $\Omega$
39	79.69V	0.003 $\mu$ A	1.71m $\Omega$	80.81V	0.002 $\mu$ A	1.97m $\Omega$
40	81.19V	0.003 $\mu$ A	2.58m $\Omega$	81.09V	0.005 $\mu$ A	1.49m $\Omega$
41	81.50V	0.005 $\mu$ A	2.56m $\Omega$	79.62V	0.003 $\mu$ A	1.53m $\Omega$
42	79.88V	0.002 $\mu$ A	1.85m $\Omega$	80.13V	0.005 $\mu$ A	1.63m $\Omega$
43	80.86V	0.005 $\mu$ A	1.63m $\Omega$	80.63V	0.002 $\mu$ A	2.57m $\Omega$
44	80.35V	0.003 $\mu$ A	1.76m $\Omega$	80.36V	0.002 $\mu$ A	1.83m $\Omega$
45	80.46V	0.004 $\mu$ A	2.50m $\Omega$	80.45V	0.004 $\mu$ A	1.59m $\Omega$
46	79.78V	0.004 $\mu$ A	1.69m $\Omega$	80.70V	0.004 $\mu$ A	1.73m $\Omega$
47	80.41V	0.003 $\mu$ A	1.56m $\Omega$	80.97V	0.002 $\mu$ A	2.06m $\Omega$
48	79.83V	0.001 $\mu$ A	1.60m $\Omega$	79.85V	0.001 $\mu$ A	1.73m $\Omega$
49	81.38V	0.004 $\mu$ A	1.77m $\Omega$	79.72V	0.003 $\mu$ A	2.45m $\Omega$
50	80.66V	0.005 $\mu$ A	2.43m $\Omega$	81.59V	0.004 $\mu$ A	1.90m $\Omega$
51	80.79V	0.001 $\mu$ A	2.17m $\Omega$	80.83V	0.003 $\mu$ A	2.35m $\Omega$
52	79.57V	0.004 $\mu$ A	2.04m $\Omega$	80.28V	0.004 $\mu$ A	2.40m $\Omega$
53	80.43V	0.005 $\mu$ A	1.59m $\Omega$	79.58V	0.004 $\mu$ A	1.53m $\Omega$
54	79.74V	0.002 $\mu$ A	1.95m $\Omega$	81.41V	0.002 $\mu$ A	2.03m $\Omega$
55	79.52V	0.003 $\mu$ A	2.45m $\Omega$	80.71V	0.003 $\mu$ A	2.08m $\Omega$
56	80.79V	0.002 $\mu$ A	2.44m $\Omega$	80.84V	0.003 $\mu$ A	1.58m $\Omega$
57	80.06V	0.004 $\mu$ A	2.32m $\Omega$	81.56V	0.002 $\mu$ A	1.95m $\Omega$
58	81.09V	0.001 $\mu$ A	1.54m $\Omega$	79.68V	0.003 $\mu$ A	2.26m $\Omega$



## High Temperature Storage Life Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 150°C, 1000Hrs

Test Date: 2015.03.02 ~ 2015.04.12

Test Standard : JESD22 STANDARD Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
59	80.54V	0.001uA	1.97mΩ	80.55V	0.005uA	2.42mΩ
60	81.05V	0.002uA	1.94mΩ	81.32V	0.005uA	1.90mΩ
61	80.56V	0.004uA	1.72mΩ	79.77V	0.005uA	1.63mΩ
62	80.57V	0.005uA	1.52mΩ	80.76V	0.002uA	2.57mΩ
63	79.67V	0.002uA	2.17mΩ	79.46V	0.004uA	1.49mΩ
64	79.98V	0.001uA	1.54mΩ	81.40V	0.003uA	2.23mΩ
65	81.33V	0.002uA	1.85mΩ	80.62V	0.003uA	1.89mΩ
66	79.94V	0.005uA	1.76mΩ	80.47V	0.004uA	1.82mΩ
67	81.15V	0.003uA	2.15mΩ	80.60V	0.001uA	2.44mΩ
68	79.70V	0.004uA	2.12mΩ	80.03V	0.001uA	1.80mΩ
69	81.48V	0.004uA	1.95mΩ	81.12V	0.002uA	2.40mΩ
70	80.76V	0.001uA	2.53mΩ	80.91V	0.003uA	2.51mΩ
71	80.58V	0.001uA	2.32mΩ	79.52V	0.001uA	1.86mΩ
72	79.54V	0.001uA	1.87mΩ	81.41V	0.002uA	1.82mΩ
73	80.27V	0.004uA	2.01mΩ	79.97V	0.003uA	1.54mΩ
74	80.06V	0.004uA	2.24mΩ	80.06V	0.002uA	2.33mΩ
75	80.49V	0.001uA	1.76mΩ	80.82V	0.002uA	1.87mΩ
76	80.28V	0.002uA	2.49mΩ	81.22V	0.005uA	2.09mΩ
77	80.04V	0.003uA	2.12mΩ	79.57V	0.001uA	2.26mΩ

Made By: King Huang

Approval: Peter Yang



# SeCoS Corporation

## Pressure Cooker Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2015.03.02 ~ 2015.03.10

Test Standard : JESD22 STANDARD Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
1	79.96V	0.001uA	2.25mΩ	80.45V	0.003uA	2.22mΩ
2	81.01V	0.004uA	2.22mΩ	79.45V	0.004uA	2.12mΩ
3	79.55V	0.001uA	1.46mΩ	80.79V	0.003uA	2.35mΩ
4	80.66V	0.002uA	1.70mΩ	80.23V	0.005uA	2.49mΩ
5	81.47V	0.005uA	1.95mΩ	81.21V	0.003uA	2.32mΩ
6	80.66V	0.003uA	2.17mΩ	80.58V	0.001uA	2.22mΩ
7	80.04V	0.004uA	1.96mΩ	80.42V	0.003uA	1.53mΩ
8	79.85V	0.002uA	1.47mΩ	81.08V	0.002uA	2.45mΩ
9	80.36V	0.004uA	1.96mΩ	81.25V	0.003uA	1.84mΩ
10	80.69V	0.003uA	2.58mΩ	79.53V	0.003uA	1.84mΩ
11	80.46V	0.002uA	1.83mΩ	79.61V	0.001uA	2.08mΩ
12	79.65V	0.003uA	2.03mΩ	80.02V	0.004uA	1.55mΩ
13	80.32V	0.004uA	1.54mΩ	80.18V	0.002uA	1.45mΩ
13	81.43V	0.005uA	2.49mΩ	80.17V	0.003uA	2.39mΩ
15	80.10V	0.003uA	1.94mΩ	80.12V	0.003uA	1.54mΩ
16	80.20V	0.004uA	1.72mΩ	81.36V	0.002uA	1.74mΩ
17	81.54V	0.002uA	1.91mΩ	81.49V	0.001uA	2.56mΩ
18	79.81V	0.005uA	2.36mΩ	80.23V	0.003uA	1.46mΩ
19	79.82V	0.002uA	2.40mΩ	81.26V	0.004uA	2.35mΩ
20	80.09V	0.003uA	2.01mΩ	80.99V	0.003uA	1.99mΩ
21	79.94V	0.003uA	1.73mΩ	80.01V	0.004uA	1.86mΩ
22	81.26V	0.003uA	1.75mΩ	79.95V	0.002uA	1.91mΩ
23	80.35V	0.003uA	1.91mΩ	81.53V	0.004uA	1.69mΩ
24	80.20V	0.003uA	1.71mΩ	80.50V	0.004uA	1.84mΩ
25	79.66V	0.001uA	2.05mΩ	81.06V	0.004uA	2.24mΩ
26	80.34V	0.003uA	2.57mΩ	81.24V	0.001uA	1.48mΩ
27	81.26V	0.002uA	2.44mΩ	79.71V	0.003uA	1.54mΩ
28	80.20V	0.004uA	2.12mΩ	80.53V	0.002uA	2.53mΩ
29	81.14V	0.005uA	1.88mΩ	79.99V	0.004uA	1.47mΩ



# SeCoS Corporation

## Pressure Cooker Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2015.03.02 ~ 2015.03.10

Test Standard : JESD22 STANDARD Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
30	80.62V	0.004uA	1.79mΩ	79.99V	0.005uA	1.55mΩ
31	80.28V	0.003uA	2.39mΩ	81.02V	0.002uA	1.69mΩ
32	79.90V	0.002uA	1.54mΩ	80.42V	0.002uA	1.63mΩ
33	79.78V	0.003uA	1.99mΩ	81.29V	0.001uA	1.66mΩ
34	80.26V	0.005uA	1.91mΩ	81.39V	0.004uA	2.10mΩ
35	79.57V	0.004uA	1.48mΩ	81.15V	0.002uA	2.04mΩ
36	79.99V	0.002uA	2.34mΩ	79.81V	0.003uA	1.73mΩ
37	80.79V	0.004uA	1.56mΩ	80.66V	0.001uA	2.13mΩ
38	80.19V	0.004uA	2.12mΩ	81.42V	0.004uA	2.37mΩ
39	79.50V	0.005uA	1.77mΩ	81.54V	0.002uA	2.24mΩ
40	79.75V	0.004uA	2.33mΩ	81.08V	0.002uA	2.56mΩ
41	80.55V	0.002uA	1.48mΩ	81.55V	0.002uA	1.60mΩ
42	80.81V	0.002uA	1.56mΩ	80.58V	0.003uA	1.83mΩ
43	79.99V	0.001uA	2.55mΩ	80.86V	0.005uA	1.84mΩ
44	80.48V	0.003uA	1.53mΩ	80.12V	0.003uA	1.65mΩ
45	79.88V	0.004uA	1.47mΩ	80.23V	0.002uA	1.76mΩ
46	80.74V	0.004uA	2.50mΩ	81.38V	0.004uA	2.21mΩ
47	81.10V	0.005uA	1.52mΩ	79.61V	0.003uA	1.93mΩ
48	80.47V	0.003uA	1.97mΩ	80.98V	0.004uA	2.45mΩ
49	80.57V	0.003uA	2.35mΩ	80.49V	0.003uA	2.06mΩ
50	80.76V	0.003uA	2.18mΩ	81.50V	0.004uA	1.46mΩ
51	80.96V	0.002uA	1.53mΩ	81.56V	0.002uA	1.55mΩ
52	79.97V	0.002uA	1.52mΩ	79.73V	0.004uA	2.05mΩ
53	80.09V	0.001uA	1.57mΩ	81.48V	0.005uA	1.46mΩ
54	79.88V	0.001uA	1.61mΩ	79.73V	0.002uA	1.74mΩ
55	79.69V	0.003uA	2.12mΩ	80.88V	0.004uA	1.53mΩ
56	80.38V	0.004uA	2.58mΩ	79.56V	0.003uA	1.64mΩ
57	80.53V	0.004uA	1.52mΩ	80.59V	0.002uA	1.64mΩ
58	79.62V	0.002uA	1.50mΩ	79.94V	0.002uA	2.04mΩ



# SeCoS Corporation

## Pressure Cooker Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250 $\mu$ A ; IDSS < 0.5 $\mu$ A@VDS=50V  
RDS(ON) < 3.5 $\Omega$ @VGS=10V, ID=220mA

Test Condition: 121 $^{\circ}$ C , 100%RH, 29.7PSIG, 168Hrs

Test Date: 2015.03.02 ~ 2015.03.10

Test Standard : JESD22 STANDARD Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
59	79.62V	0.003uA	2.07m $\Omega$	79.69V	0.002uA	2.37m $\Omega$
60	80.96V	0.003uA	1.65m $\Omega$	80.37V	0.003uA	1.72m $\Omega$
61	81.12V	0.004uA	1.70m $\Omega$	79.75V	0.001uA	2.41m $\Omega$
62	80.54V	0.003uA	2.35m $\Omega$	80.39V	0.005uA	1.99m $\Omega$
63	81.53V	0.001uA	1.84m $\Omega$	80.83V	0.005uA	2.20m $\Omega$
64	81.13V	0.002uA	1.55m $\Omega$	80.35V	0.004uA	1.72m $\Omega$
65	80.65V	0.004uA	2.01m $\Omega$	80.62V	0.003uA	1.54m $\Omega$
66	81.22V	0.002uA	2.48m $\Omega$	80.33V	0.002uA	2.58m $\Omega$
67	81.28V	0.005uA	2.23m $\Omega$	79.95V	0.003uA	2.01m $\Omega$
68	80.22V	0.004uA	2.47m $\Omega$	80.50V	0.004uA	2.53m $\Omega$
69	80.13V	0.003uA	1.83m $\Omega$	80.08V	0.004uA	1.86m $\Omega$
70	81.50V	0.003uA	1.92m $\Omega$	80.01V	0.004uA	1.85m $\Omega$
71	80.24V	0.002uA	1.62m $\Omega$	81.10V	0.004uA	1.47m $\Omega$
72	81.42V	0.003uA	2.42m $\Omega$	80.33V	0.003uA	2.39m $\Omega$
73	81.58V	0.003uA	1.78m $\Omega$	80.24V	0.005uA	2.14m $\Omega$
74	79.54V	0.005uA	2.05m $\Omega$	79.88V	0.002uA	1.52m $\Omega$
75	80.42V	0.004uA	2.07m $\Omega$	81.48V	0.005uA	1.79m $\Omega$
76	80.59V	0.001uA	2.05m $\Omega$	80.64V	0.003uA	2.00m $\Omega$
77	81.05V	0.003uA	2.41m $\Omega$	79.60V	0.001uA	1.63m $\Omega$

Made By: King Huang

Approval: Peter Yang





# SeCoS Corporation

## Temperature Cycle Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2015.03.06 ~ 2015.04.28

Test Standard : JESD22 STANDARD Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
1	80.03V	0.002uA	1.51mΩ	81.56V	0.002uA	1.51mΩ
2	81.38V	0.004uA	2.12mΩ	80.20V	0.005uA	1.71mΩ
3	81.39V	0.004uA	2.33mΩ	79.83V	0.004uA	1.93mΩ
4	80.85V	0.003uA	2.48mΩ	80.54V	0.003uA	1.59mΩ
5	79.50V	0.003uA	2.22mΩ	80.73V	0.005uA	1.63mΩ
6	80.70V	0.003uA	1.59mΩ	79.67V	0.003uA	2.38mΩ
7	79.90V	0.002uA	1.69mΩ	80.85V	0.005uA	2.46mΩ
8	81.35V	0.003uA	2.29mΩ	81.59V	0.004uA	1.59mΩ
9	81.25V	0.003uA	1.72mΩ	79.46V	0.005uA	1.55mΩ
10	79.99V	0.003uA	2.44mΩ	79.70V	0.002uA	2.54mΩ
11	81.31V	0.003uA	1.60mΩ	81.35V	0.004uA	2.32mΩ
12	81.31V	0.003uA	2.30mΩ	80.08V	0.005uA	1.70mΩ
13	81.26V	0.002uA	1.59mΩ	79.58V	0.001uA	2.23mΩ
13	80.70V	0.003uA	1.73mΩ	80.61V	0.003uA	2.11mΩ
15	80.38V	0.004uA	1.67mΩ	80.38V	0.003uA	2.50mΩ
16	80.35V	0.002uA	2.10mΩ	80.65V	0.002uA	2.39mΩ
17	79.99V	0.004uA	1.55mΩ	81.24V	0.002uA	1.54mΩ
18	81.02V	0.002uA	2.43mΩ	80.91V	0.001uA	1.56mΩ
19	81.48V	0.003uA	1.55mΩ	79.51V	0.002uA	1.55mΩ
20	80.20V	0.004uA	2.30mΩ	80.79V	0.001uA	1.66mΩ
21	80.40V	0.002uA	2.12mΩ	81.47V	0.004uA	1.71mΩ
22	79.71V	0.005uA	1.78mΩ	80.05V	0.004uA	1.88mΩ
23	80.51V	0.001uA	1.69mΩ	79.85V	0.004uA	2.34mΩ
24	81.21V	0.005uA	1.76mΩ	80.45V	0.001uA	2.11mΩ
25	80.92V	0.002uA	1.99mΩ	80.71V	0.001uA	2.03mΩ
26	80.33V	0.002uA	1.48mΩ	80.46V	0.003uA	2.50mΩ
27	80.14V	0.003uA	2.57mΩ	80.53V	0.005uA	1.73mΩ
28	81.36V	0.002uA	1.76mΩ	80.39V	0.004uA	1.90mΩ
29	80.02V	0.003uA	2.19mΩ	81.51V	0.003uA	1.51mΩ





# SeCoS Corporation

## Temperature Cycle Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2015.03.06 ~ 2015.04.28

Test Standard : JESD22 STANDARD Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
30	79.80V	0.003uA	2.25mΩ	80.13V	0.003uA	2.22mΩ
31	79.96V	0.003uA	2.11mΩ	80.79V	0.003uA	1.84mΩ
32	81.08V	0.004uA	1.95mΩ	81.48V	0.004uA	2.22mΩ
33	79.53V	0.002uA	2.43mΩ	81.14V	0.003uA	2.30mΩ
34	81.53V	0.002uA	2.48mΩ	79.70V	0.003uA	2.08mΩ
35	80.37V	0.005uA	2.20mΩ	80.22V	0.002uA	2.50mΩ
36	80.88V	0.003uA	1.82mΩ	81.04V	0.002uA	2.35mΩ
37	79.74V	0.002uA	2.00mΩ	79.94V	0.002uA	1.85mΩ
38	80.29V	0.003uA	1.72mΩ	80.47V	0.003uA	1.54mΩ
39	81.45V	0.003uA	2.17mΩ	79.75V	0.003uA	2.29mΩ
40	81.07V	0.002uA	1.51mΩ	81.46V	0.002uA	2.50mΩ
41	80.09V	0.001uA	1.62mΩ	79.71V	0.004uA	2.51mΩ
42	81.48V	0.002uA	2.48mΩ	80.83V	0.004uA	1.47mΩ
43	79.61V	0.002uA	1.63mΩ	79.95V	0.004uA	1.76mΩ
44	81.47V	0.001uA	1.77mΩ	80.39V	0.003uA	2.41mΩ
45	80.27V	0.003uA	2.44mΩ	79.88V	0.004uA	1.96mΩ
46	79.46V	0.004uA	1.93mΩ	81.22V	0.002uA	2.51mΩ
47	79.73V	0.003uA	1.78mΩ	80.06V	0.004uA	2.41mΩ
48	81.11V	0.005uA	2.33mΩ	80.86V	0.003uA	1.75mΩ
49	80.48V	0.002uA	2.56mΩ	79.73V	0.003uA	1.99mΩ
50	80.16V	0.001uA	2.47mΩ	80.56V	0.003uA	2.09mΩ
51	80.41V	0.003uA	1.59mΩ	80.98V	0.002uA	1.87mΩ
52	80.14V	0.002uA	2.52mΩ	81.21V	0.003uA	2.05mΩ
53	80.17V	0.002uA	2.22mΩ	80.53V	0.001uA	1.91mΩ
54	79.92V	0.005uA	1.79mΩ	80.39V	0.004uA	2.24mΩ
55	79.95V	0.003uA	2.30mΩ	80.84V	0.002uA	1.45mΩ
56	81.34V	0.005uA	1.98mΩ	79.78V	0.004uA	1.77mΩ
57	81.18V	0.002uA	1.96mΩ	80.90V	0.004uA	1.90mΩ
58	80.57V	0.002uA	2.33mΩ	81.05V	0.003uA	2.48mΩ



# SeCoS Corporation

## Temperature Cycle Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2015.03.06 ~ 2015.04.28

Test Standard : JESD22 STANDARD Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
59	81.29V	0.004uA	2.30mΩ	79.82V	0.004uA	1.54mΩ
60	80.80V	0.004uA	1.72mΩ	80.73V	0.004uA	1.90mΩ
61	79.63V	0.003uA	1.77mΩ	80.76V	0.004uA	2.39mΩ
62	80.99V	0.002uA	1.66mΩ	79.79V	0.003uA	2.24mΩ
63	80.71V	0.003uA	1.57mΩ	80.13V	0.004uA	2.05mΩ
64	80.14V	0.004uA	1.51mΩ	81.15V	0.003uA	1.53mΩ
65	81.35V	0.003uA	2.42mΩ	80.98V	0.005uA	2.50mΩ
66	79.48V	0.001uA	2.09mΩ	79.56V	0.003uA	1.85mΩ
67	80.77V	0.002uA	2.20mΩ	80.38V	0.005uA	1.45mΩ
68	79.68V	0.001uA	1.73mΩ	80.72V	0.005uA	2.00mΩ
69	80.58V	0.004uA	2.35mΩ	80.36V	0.003uA	1.94mΩ
70	80.14V	0.004uA	1.84mΩ	81.07V	0.002uA	2.22mΩ
71	80.57V	0.001uA	1.85mΩ	79.90V	0.002uA	1.62mΩ
72	80.83V	0.002uA	1.66mΩ	80.36V	0.003uA	1.70mΩ
73	79.50V	0.003uA	1.92mΩ	79.91V	0.003uA	2.51mΩ
74	81.51V	0.003uA	1.86mΩ	80.63V	0.005uA	1.64mΩ
75	80.69V	0.002uA	1.68mΩ	81.23V	0.001uA	1.93mΩ
76	80.64V	0.002uA	2.32mΩ	80.51V	0.001uA	1.76mΩ
77	81.34V	0.005uA	2.15mΩ	79.67V	0.005uA	2.48mΩ

Made By: King Huang

Approval: Peter Yang



## High Temperature High Humidity Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 85±2°C , 85±5%RH, 1000Hrs

Test Date: 2015.03.11 ~ 2015.04.23

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
1	79.72V	0.005uA	1.89mΩ	81.28V	0.002uA	1.93mΩ
2	80.34V	0.005uA	1.62mΩ	81.12V	0.001uA	2.02mΩ
3	80.57V	0.003uA	2.14mΩ	81.14V	0.004uA	2.34mΩ
4	81.07V	0.005uA	1.54mΩ	79.97V	0.001uA	1.59mΩ
5	81.36V	0.003uA	1.55mΩ	80.66V	0.004uA	2.46mΩ
6	80.82V	0.001uA	1.54mΩ	79.70V	0.002uA	2.55mΩ
7	80.80V	0.003uA	1.57mΩ	79.73V	0.001uA	1.60mΩ
8	81.44V	0.004uA	1.86mΩ	81.19V	0.003uA	2.20mΩ
9	80.59V	0.001uA	1.96mΩ	81.14V	0.003uA	1.49mΩ
10	80.27V	0.003uA	2.16mΩ	79.82V	0.002uA	1.53mΩ
11	81.43V	0.003uA	1.46mΩ	81.18V	0.002uA	1.70mΩ
12	79.56V	0.005uA	2.52mΩ	80.38V	0.003uA	2.08mΩ
13	80.70V	0.003uA	1.67mΩ	81.02V	0.004uA	1.94mΩ
13	79.74V	0.002uA	2.20mΩ	80.41V	0.004uA	2.54mΩ
15	79.89V	0.002uA	2.56mΩ	80.45V	0.001uA	1.79mΩ
16	80.26V	0.001uA	2.03mΩ	80.89V	0.004uA	1.65mΩ
17	80.38V	0.002uA	2.25mΩ	81.58V	0.004uA	2.02mΩ
18	80.95V	0.002uA	2.26mΩ	81.50V	0.005uA	2.09mΩ
19	80.61V	0.005uA	1.81mΩ	80.44V	0.003uA	2.09mΩ
20	79.87V	0.003uA	2.54mΩ	79.91V	0.005uA	1.51mΩ
21	81.40V	0.003uA	1.63mΩ	80.14V	0.003uA	1.82mΩ
22	80.31V	0.005uA	2.35mΩ	81.00V	0.004uA	2.45mΩ
23	80.94V	0.005uA	2.34mΩ	81.46V	0.002uA	1.85mΩ
24	80.37V	0.002uA	2.20mΩ	80.88V	0.003uA	1.55mΩ
25	81.49V	0.002uA	1.91mΩ	80.03V	0.005uA	2.14mΩ
26	81.06V	0.002uA	1.79mΩ	79.48V	0.005uA	1.68mΩ
27	80.72V	0.002uA	2.36mΩ	79.51V	0.001uA	1.72mΩ
28	79.93V	0.002uA	2.20mΩ	80.44V	0.001uA	1.74mΩ
29	81.41V	0.003uA	2.11mΩ	80.56V	0.003uA	1.62mΩ



## High Temperature High Humidity Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 85±2°C , 85±5%RH, 1000Hrs

Test Date: 2015.03.11 ~ 2015.04.23

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
30	80.34V	0.004uA	1.77mΩ	81.09V	0.005uA	1.95mΩ
31	80.71V	0.003uA	1.81mΩ	81.10V	0.002uA	2.06mΩ
32	80.90V	0.003uA	2.34mΩ	79.66V	0.003uA	1.74mΩ
33	80.26V	0.003uA	2.18mΩ	79.79V	0.003uA	1.47mΩ
34	80.98V	0.003uA	2.08mΩ	80.19V	0.002uA	1.72mΩ
35	80.55V	0.002uA	1.52mΩ	79.78V	0.003uA	1.92mΩ
36	80.33V	0.005uA	2.06mΩ	80.66V	0.003uA	1.63mΩ
37	80.35V	0.002uA	1.82mΩ	79.66V	0.005uA	2.50mΩ
38	79.51V	0.005uA	2.04mΩ	79.56V	0.004uA	1.46mΩ
39	80.90V	0.002uA	2.09mΩ	80.13V	0.002uA	1.84mΩ
40	80.20V	0.001uA	2.13mΩ	80.82V	0.004uA	2.11mΩ
41	80.86V	0.004uA	1.53mΩ	81.59V	0.003uA	1.59mΩ
42	80.00V	0.001uA	1.97mΩ	80.69V	0.003uA	2.20mΩ
43	79.98V	0.003uA	1.97mΩ	81.36V	0.003uA	1.56mΩ
44	79.92V	0.002uA	2.19mΩ	79.82V	0.003uA	2.04mΩ
45	81.24V	0.003uA	2.13mΩ	81.55V	0.005uA	2.45mΩ
46	81.33V	0.004uA	1.83mΩ	80.57V	0.003uA	2.40mΩ
47	80.62V	0.001uA	1.90mΩ	81.59V	0.004uA	2.26mΩ
48	80.45V	0.003uA	1.93mΩ	80.12V	0.002uA	2.45mΩ
49	81.05V	0.002uA	2.50mΩ	80.50V	0.002uA	1.67mΩ
50	79.95V	0.002uA	2.10mΩ	80.60V	0.002uA	2.09mΩ
51	80.88V	0.002uA	1.92mΩ	79.62V	0.001uA	2.00mΩ
52	80.28V	0.004uA	1.72mΩ	79.63V	0.005uA	1.90mΩ
53	80.22V	0.002uA	2.53mΩ	81.59V	0.001uA	1.77mΩ
54	81.48V	0.001uA	1.86mΩ	79.63V	0.005uA	1.46mΩ
55	80.02V	0.002uA	2.22mΩ	80.81V	0.002uA	1.48mΩ
56	80.44V	0.003uA	2.18mΩ	80.35V	0.005uA	2.11mΩ
57	80.75V	0.002uA	1.71mΩ	79.50V	0.005uA	2.48mΩ
58	81.59V	0.005uA	2.08mΩ	80.41V	0.002uA	1.80mΩ



## High Temperature High Humidity Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 85±2°C , 85±5%RH, 1000Hrs

Test Date: 2015.03.11 ~ 2015.04.23

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
59	80.09V	0.004uA	1.91mΩ	79.65V	0.002uA	1.56mΩ
60	81.32V	0.004uA	1.90mΩ	81.39V	0.003uA	1.77mΩ
61	79.78V	0.001uA	1.85mΩ	80.57V	0.002uA	1.98mΩ
62	79.63V	0.001uA	2.11mΩ	80.12V	0.003uA	1.91mΩ
63	79.46V	0.004uA	2.18mΩ	79.50V	0.001uA	2.14mΩ
64	80.74V	0.002uA	2.18mΩ	80.79V	0.001uA	2.36mΩ
65	80.83V	0.004uA	1.99mΩ	79.71V	0.004uA	2.36mΩ
66	79.50V	0.001uA	2.56mΩ	80.40V	0.003uA	2.36mΩ
67	79.49V	0.003uA	1.66mΩ	80.33V	0.004uA	1.48mΩ
68	81.57V	0.005uA	1.79mΩ	80.66V	0.004uA	1.53mΩ
69	81.13V	0.002uA	2.08mΩ	80.60V	0.003uA	2.39mΩ
70	81.55V	0.003uA	2.10mΩ	80.94V	0.005uA	2.08mΩ
71	79.78V	0.003uA	1.81mΩ	79.99V	0.002uA	2.01mΩ
72	80.75V	0.004uA	2.53mΩ	79.70V	0.005uA	1.80mΩ
73	80.80V	0.002uA	2.28mΩ	80.83V	0.004uA	1.63mΩ
74	80.54V	0.002uA	1.56mΩ	80.96V	0.001uA	1.47mΩ
75	80.61V	0.002uA	2.16mΩ	79.99V	0.004uA	2.17mΩ
76	80.25V	0.004uA	1.88mΩ	80.88V	0.003uA	2.08mΩ
77	80.59V	0.003uA	2.56mΩ	81.08V	0.003uA	1.75mΩ

Made By: King Huang

Approval: Peter Yang



## High Temper High Humidity Reverse Bies Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 85±2°C , 85±5%RH, 80% VR, 1000Hrs

Test Date: 2015.03.12 ~ 2015.04.24

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
1	81.38V	0.002uA	1.64mΩ	81.20V	0.001uA	1.99mΩ
2	80.58V	0.002uA	2.20mΩ	79.91V	0.002uA	1.98mΩ
3	80.46V	0.001uA	1.88mΩ	80.94V	0.003uA	1.47mΩ
4	81.32V	0.003uA	2.23mΩ	80.57V	0.001uA	2.39mΩ
5	80.01V	0.003uA	1.78mΩ	79.64V	0.001uA	1.61mΩ
6	81.00V	0.003uA	2.33mΩ	80.67V	0.005uA	1.95mΩ
7	80.24V	0.004uA	2.16mΩ	79.58V	0.003uA	1.98mΩ
8	80.36V	0.005uA	1.59mΩ	80.59V	0.001uA	2.00mΩ
9	80.86V	0.003uA	2.39mΩ	81.34V	0.004uA	1.77mΩ
10	79.98V	0.003uA	2.17mΩ	79.67V	0.003uA	2.01mΩ
11	79.73V	0.001uA	1.64mΩ	81.02V	0.002uA	2.30mΩ
12	80.66V	0.003uA	2.42mΩ	81.02V	0.003uA	1.78mΩ
13	80.83V	0.001uA	1.84mΩ	80.21V	0.003uA	2.05mΩ
13	79.96V	0.003uA	1.91mΩ	80.05V	0.005uA	2.29mΩ
15	79.53V	0.002uA	1.66mΩ	81.00V	0.004uA	1.71mΩ
16	81.30V	0.002uA	1.59mΩ	79.80V	0.004uA	2.14mΩ
17	81.16V	0.001uA	2.07mΩ	80.14V	0.004uA	2.10mΩ
18	79.62V	0.002uA	1.79mΩ	81.30V	0.004uA	2.07mΩ
19	79.97V	0.002uA	1.55mΩ	81.36V	0.003uA	2.13mΩ
20	80.14V	0.004uA	2.27mΩ	80.60V	0.002uA	2.56mΩ
21	81.58V	0.004uA	1.58mΩ	81.58V	0.002uA	1.64mΩ
22	81.16V	0.005uA	2.36mΩ	80.06V	0.001uA	1.93mΩ
23	79.59V	0.003uA	2.38mΩ	80.28V	0.005uA	1.52mΩ
24	80.09V	0.001uA	2.01mΩ	80.37V	0.003uA	1.94mΩ
25	80.16V	0.002uA	2.49mΩ	81.39V	0.001uA	1.66mΩ
26	80.79V	0.003uA	2.17mΩ	81.22V	0.002uA	1.88mΩ
27	80.04V	0.003uA	1.67mΩ	80.98V	0.003uA	2.33mΩ
28	80.13V	0.001uA	1.88mΩ	81.38V	0.003uA	2.05mΩ
29	81.34V	0.002uA	1.84mΩ	81.08V	0.004uA	1.87mΩ



## High Temper High Humidity Reverse Bies Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V

RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 85±2°C , 85±5%RH, 80% VR, 1000Hrs

Test Date: 2015.03.12 ~ 2015.04.24

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
30	79.86V	0.004uA	1.69mΩ	79.88V	0.003uA	2.52mΩ
31	79.54V	0.003uA	1.87mΩ	80.69V	0.005uA	2.52mΩ
32	81.07V	0.002uA	2.55mΩ	79.74V	0.004uA	2.53mΩ
33	79.48V	0.001uA	2.29mΩ	79.79V	0.003uA	1.66mΩ
34	79.89V	0.004uA	1.78mΩ	80.85V	0.003uA	2.55mΩ
35	81.02V	0.002uA	2.16mΩ	80.39V	0.002uA	2.08mΩ
36	80.91V	0.004uA	1.70mΩ	79.85V	0.004uA	2.33mΩ
37	80.48V	0.003uA	2.16mΩ	79.47V	0.004uA	1.76mΩ
38	79.95V	0.002uA	2.25mΩ	79.67V	0.003uA	1.96mΩ
39	81.04V	0.001uA	2.42mΩ	80.97V	0.003uA	2.00mΩ
40	81.10V	0.001uA	2.26mΩ	80.22V	0.001uA	1.98mΩ
41	80.86V	0.004uA	2.06mΩ	79.69V	0.003uA	2.00mΩ
42	81.25V	0.002uA	1.53mΩ	81.17V	0.002uA	1.83mΩ
43	79.68V	0.004uA	1.79mΩ	79.99V	0.003uA	1.78mΩ
44	81.27V	0.003uA	1.53mΩ	80.76V	0.002uA	2.00mΩ
45	80.86V	0.003uA	2.36mΩ	80.92V	0.002uA	1.81mΩ
46	80.26V	0.005uA	2.26mΩ	79.62V	0.001uA	1.77mΩ
47	80.48V	0.003uA	1.52mΩ	80.23V	0.005uA	1.45mΩ
48	80.67V	0.005uA	1.67mΩ	79.69V	0.004uA	2.10mΩ
49	80.88V	0.003uA	2.05mΩ	80.95V	0.005uA	1.71mΩ
50	81.48V	0.005uA	1.51mΩ	80.40V	0.002uA	2.51mΩ
51	79.96V	0.001uA	2.56mΩ	80.30V	0.004uA	1.98mΩ
52	80.58V	0.002uA	1.45mΩ	79.59V	0.002uA	2.00mΩ
53	80.26V	0.005uA	1.90mΩ	79.94V	0.005uA	1.67mΩ
54	81.48V	0.005uA	1.56mΩ	81.36V	0.003uA	1.48mΩ
55	81.19V	0.004uA	2.15mΩ	81.50V	0.004uA	2.05mΩ
56	79.76V	0.003uA	2.28mΩ	79.72V	0.002uA	2.47mΩ
57	81.58V	0.005uA	1.62mΩ	81.32V	0.003uA	2.36mΩ
58	80.10V	0.004uA	2.31mΩ	79.47V	0.002uA	2.16mΩ





## High Temper High Humidity Reverse Bies Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition : 50V <V(BR)DSS @ID=250μA ; IDSS < 0.5μA@VDS=50V  
RDS(ON) < 3.5Ω@VGS=10V, ID=220mA

Test Condition: 85±2°C , 85±5%RH, 80% VR, 1000Hrs

Test Date: 2015.03.12 ~ 2015.04.24

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	V(BR)DSS	IDSS	RDS(ON)	V(BR)DSS	IDSS	RDS(ON)
59	80.84V	0.003uA	2.09mΩ	81.29V	0.001uA	1.96mΩ
60	80.85V	0.004uA	2.23mΩ	81.33V	0.003uA	1.47mΩ
61	79.46V	0.003uA	1.95mΩ	80.43V	0.004uA	1.98mΩ
62	79.47V	0.004uA	1.61mΩ	81.25V	0.004uA	1.55mΩ
63	81.58V	0.005uA	2.58mΩ	79.51V	0.001uA	2.15mΩ
64	79.56V	0.002uA	2.02mΩ	80.93V	0.005uA	1.55mΩ
65	80.74V	0.005uA	2.41mΩ	79.86V	0.005uA	1.65mΩ
66	79.68V	0.003uA	1.46mΩ	79.50V	0.003uA	2.50mΩ
67	80.54V	0.001uA	2.05mΩ	80.93V	0.003uA	2.31mΩ
68	80.82V	0.001uA	1.76mΩ	80.79V	0.005uA	1.53mΩ
69	81.35V	0.002uA	1.67mΩ	79.72V	0.003uA	2.57mΩ
70	80.94V	0.005uA	2.53mΩ	79.96V	0.003uA	2.32mΩ
71	80.84V	0.004uA	1.94mΩ	80.75V	0.002uA	2.14mΩ
72	81.46V	0.002uA	1.73mΩ	80.82V	0.004uA	1.51mΩ
73	79.80V	0.001uA	2.11mΩ	80.19V	0.002uA	2.58mΩ
74	79.87V	0.001uA	1.70mΩ	81.40V	0.001uA	1.99mΩ
75	80.49V	0.004uA	1.85mΩ	79.51V	0.004uA	1.97mΩ
76	79.56V	0.003uA	1.82mΩ	80.05V	0.004uA	1.93mΩ
77	80.40V	0.002uA	2.04mΩ	79.74V	0.002uA	1.60mΩ

Made By: King Huang

Approval: Peter Yang





# SeCoS Corporation

## Solderability Test Data

Report No : T150430-010

Part No : SMS318

Test Equipment: JUNO Test System DTS-1000

Test Condition :  $50V < V(BR)_{DSS}$  @  $I_{DSS} = 250\mu A$  ;  $I_{DSS} < 0.5\mu A @ V_{DS} = 50V$   
 $R_{DS(ON)} < 3.5\Omega @ V_{GS} = 10V, I_D = 220mA$

Test Condition:  $245^{\circ}C \pm 5^{\circ}C$ , 5Sec

Test Date: 2015.04.29

Test Standard : JESD22 STANDER Method-B102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	$V(BR)_{DSS}$	$I_{DSS}$	$R_{DS(ON)}$	$V(BR)_{DSS}$	$I_{DSS}$	$R_{DS(ON)}$
1	81.59V	0.002uA	2.23m $\Omega$	80.46V	0.003uA	1.96m $\Omega$
2	80.32V	0.003uA	1.71m $\Omega$	81.33V	0.004uA	1.58m $\Omega$
3	80.69V	0.002uA	1.70m $\Omega$	81.55V	0.002uA	1.77m $\Omega$
4	81.46V	0.002uA	1.49m $\Omega$	80.14V	0.003uA	1.84m $\Omega$
5	81.35V	0.002uA	2.53m $\Omega$	80.98V	0.004uA	2.33m $\Omega$
6	81.59V	0.003uA	2.13m $\Omega$	80.42V	0.003uA	1.62m $\Omega$
7	81.17V	0.005uA	1.87m $\Omega$	80.66V	0.002uA	1.74m $\Omega$
8	80.84V	0.002uA	2.17m $\Omega$	79.57V	0.001uA	1.88m $\Omega$
9	79.79V	0.002uA	1.93m $\Omega$	80.60V	0.002uA	2.55m $\Omega$
10	80.64V	0.001uA	1.49m $\Omega$	79.84V	0.004uA	2.05m $\Omega$

Made By: King Huang

Approval: Peter Yang