



TEST DATA OF SUS101205 SU CS101205

Regulated DC Power Supply
Mar 24, 2005

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Tetsuo Sugimori Design Manager

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Yoshimichi Hirokawa Design Engineer

COSEL CO.,LTD.



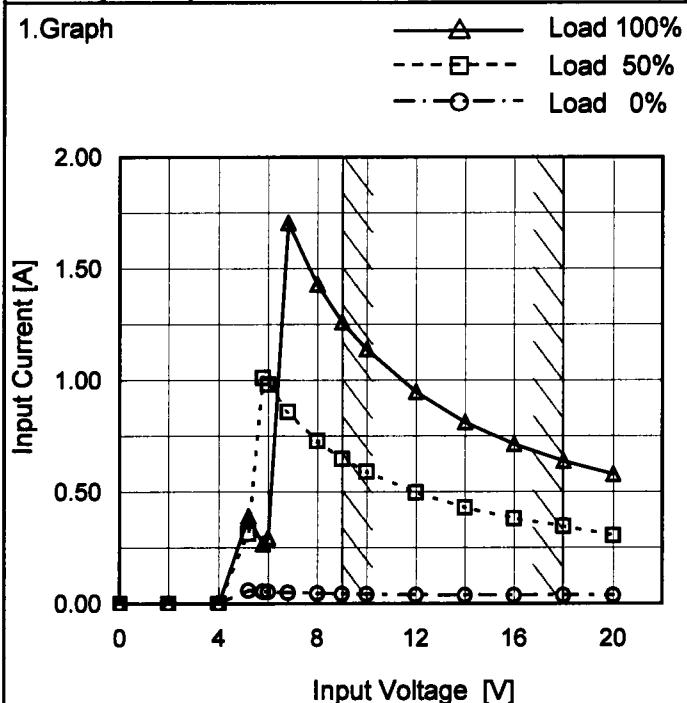
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(Final Page 18)

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Model	SUS101205/SUCS101205
Item	Input Current (by Input Voltage)
Object	—



Note: Slanted line shows the range of the rated input voltage.

Temperature 25°C
Testing Circuitry Figure A

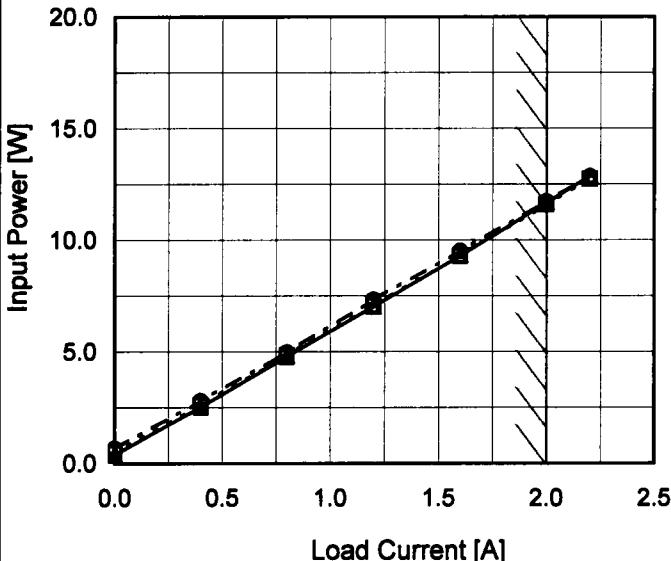
2. Values

Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0.0	0.000	0.000	0.000
2.0	0.000	0.000	0.000
4.0	0.000	0.000	0.000
5.2	0.060	0.314	0.391
5.8	0.054	1.011	0.268
6.0	0.053	0.981	0.294
6.8	0.049	0.859	1.705
8.0	0.046	0.728	1.429
9.0	0.043	0.648	1.259
10.0	0.042	0.591	1.139
12.0	0.040	0.497	0.948
14.0	0.038	0.430	0.812
16.0	0.037	0.381	0.713
18.0	0.038	0.346	0.638
20.0	0.038	0.305	0.579
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--	-	-	-

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Model	SUS101205/SUCS101205	Temperature	25°C																																																			
Item	Input Current (by Load Current)	Testing Circuitry	Figure A																																																			
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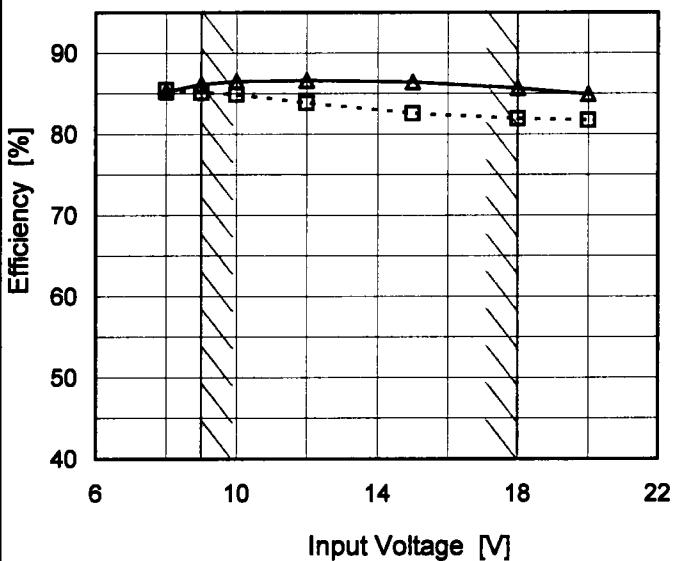
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Model	SUS101205/SUCS101205
Item	Efficiency (by Input Voltage)
Object	—

1. Graph

---□--- Load 50%
—△— Load 100%



Note: Slanted line shows the range of the rated input voltage.

Temperature 25°C
Testing Circuitry Figure A

2. Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
8	85.5	85.3
9	85.1	86.1
10	84.9	86.5
12	83.9	86.6
15	82.5	86.4
18	81.9	85.7
20	81.7	84.9
--	-	-
--	-	-

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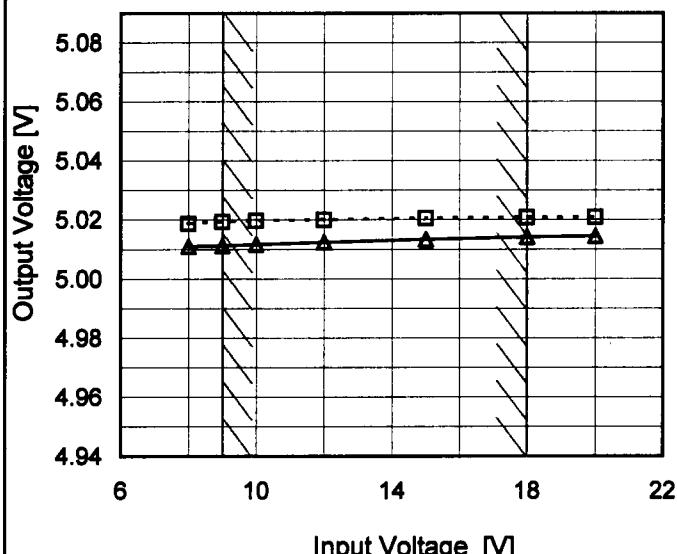
Note: Slanted line shows the range of the rated load current.

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Model	SUS101205/SUCS101205
Item	Line Regulation
Object	+5V2A

 Temperature 25°C
 Testing Circuitry Figure A

1.Graph

 --- □--- Load 50%
 —△— Load 100%


Note: Slanted line shows the range of the rated input voltage.

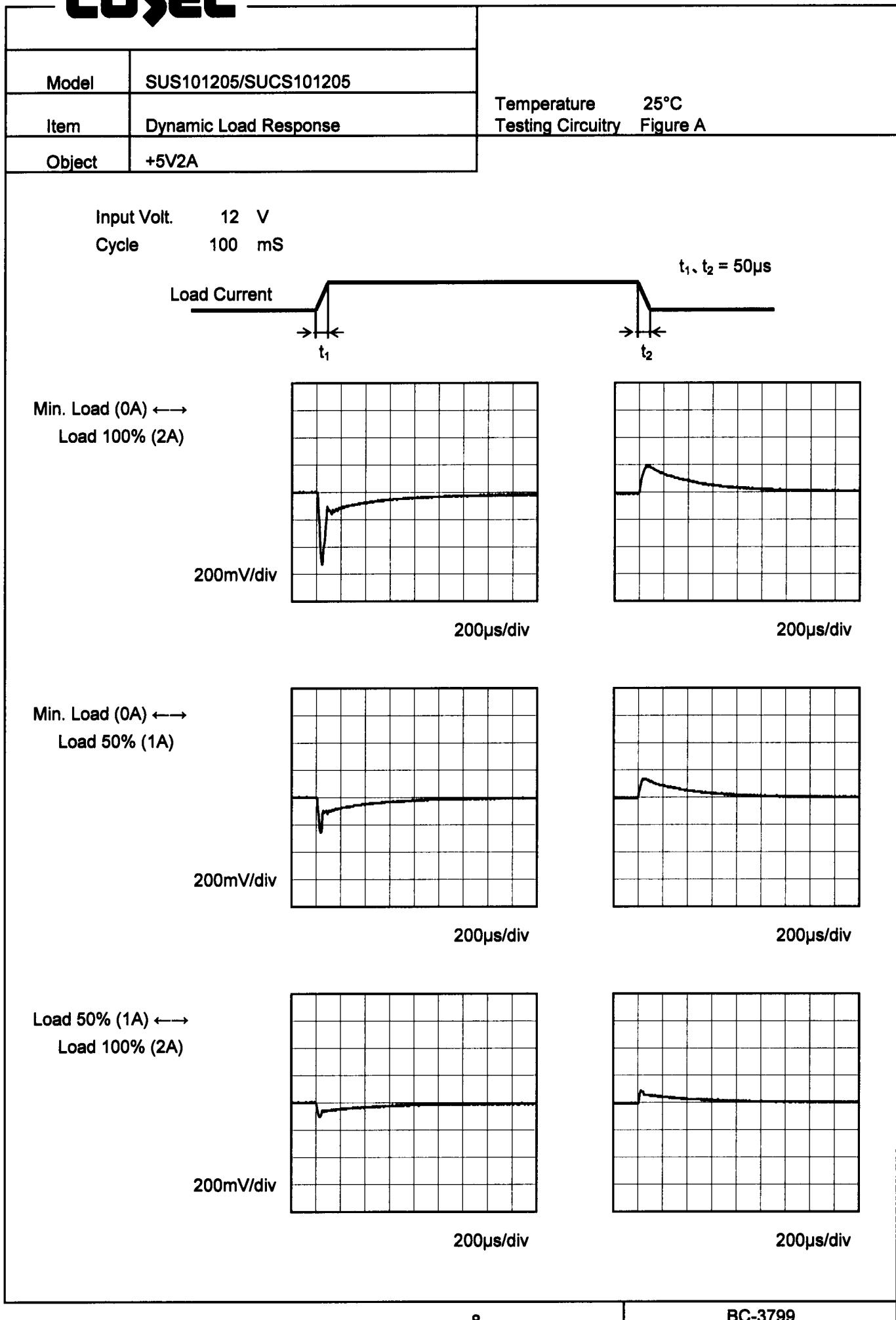
2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
8	5.019	5.011
9	5.019	5.011
10	5.020	5.012
12	5.020	5.013
15	5.021	5.013
18	5.021	5.014
20	5.021	5.015
-	-	-
-	-	-

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Model	SUS101205/SUCS101205	Temperature	25°C																																																			
Item	Load Regulation	Testing Circuitry	Figure A																																																			
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1.Graph		2.Values																																																				
<p>The graph plots Output Voltage [V] on the Y-axis (4.94 to 5.08) against Load Current [A] on the X-axis (0.0 to 2.5). Three curves are shown for Input Voltages of 9V, 12V, and 18V. All curves show a constant output voltage until a load current of 2.0A is reached, after which the output voltage drops sharply. A slanted line is drawn across the graph to indicate the range of the rated load current.</p>		<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 9[V]</th> <th>Input Volt. 12[V]</th> <th>Input Volt. 18[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.023</td><td>5.023</td><td>5.023</td></tr> <tr><td>0.4</td><td>5.023</td><td>5.022</td><td>5.022</td></tr> <tr><td>0.8</td><td>5.021</td><td>5.021</td><td>5.021</td></tr> <tr><td>1.2</td><td>5.019</td><td>5.019</td><td>5.020</td></tr> <tr><td>1.6</td><td>5.015</td><td>5.017</td><td>5.018</td></tr> <tr><td>2.0</td><td>5.012</td><td>5.014</td><td>5.015</td></tr> <tr><td>2.2</td><td>5.010</td><td>5.012</td><td>5.014</td></tr> <tr><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>		Load Current [A]	Output Voltage [V]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	0.0	5.023	5.023	5.023	0.4	5.023	5.022	5.022	0.8	5.021	5.021	5.021	1.2	5.019	5.019	5.020	1.6	5.015	5.017	5.018	2.0	5.012	5.014	5.015	2.2	5.010	5.012	5.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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<p>Note: Slanted line shows the range of the rated load current.</p>																																																						

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Model	SUS101205/SUCS101205																																							
Item	Ripple Voltage (by Load Current)	Temperature 25°C Testing Circuitry Figure B																																						
Object	+5V2A																																							
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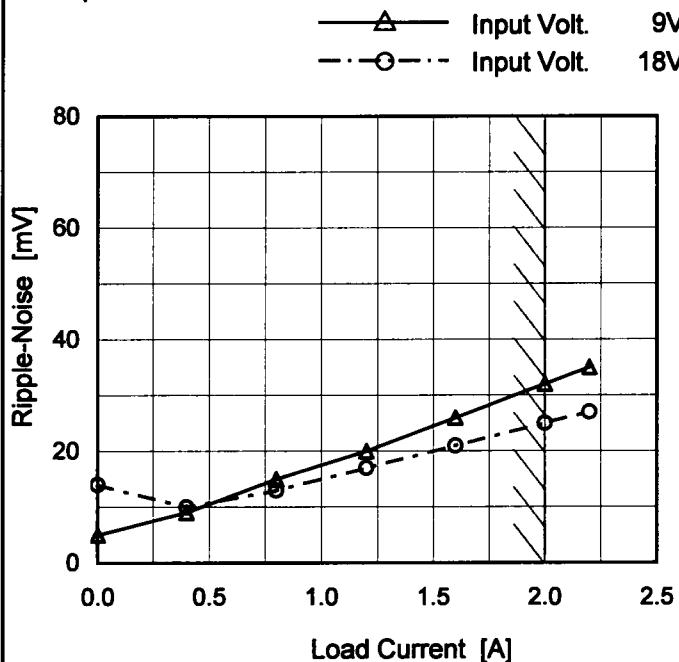
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Model SUS101205/SUCS101205

Item Ripple-Noise

Object +5V2A

1. Graph



Measured by 100 MHz Oscilloscope.

Ripple-Noise is shown as p-p in the figure below.

Note: Slanted line shows the range of the rated load current.

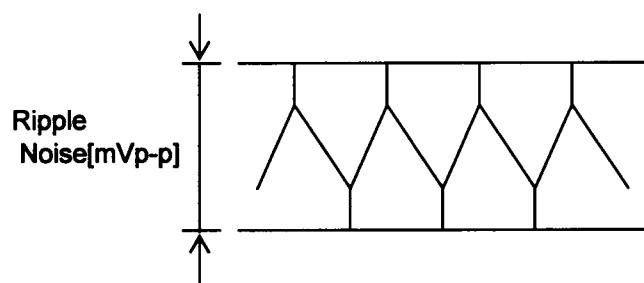


Fig.Complex Ripple Noise Wave Form

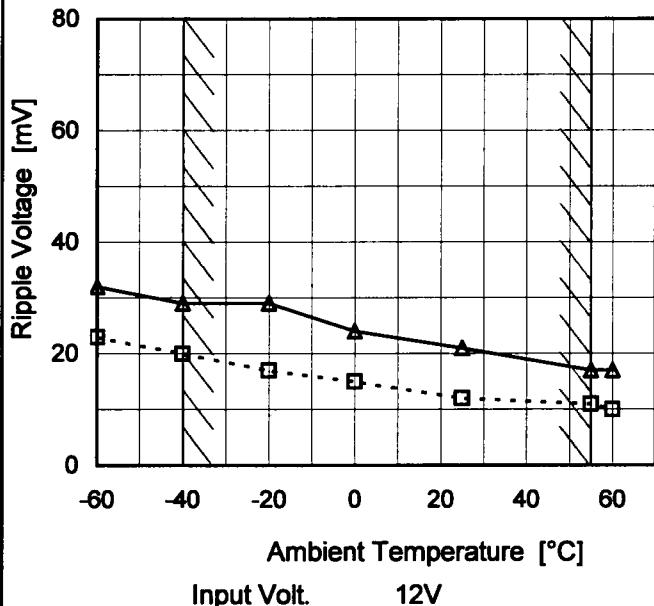
Temperature 25°C
Testing Circuitry Figure B

2. Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 9 [V]	Input Volt. 18 [V]
0.0	5	14
0.4	9	10
0.8	15	13
1.2	20	17
1.6	26	21
2.0	32	25
2.2	35	27
—	—	—
—	—	—
—	—	—
—	—	—

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Model SUS101205/SUCS101205
Item Ripple Voltage (by Ambient Temp.)
Object +5V2A
1. Graph

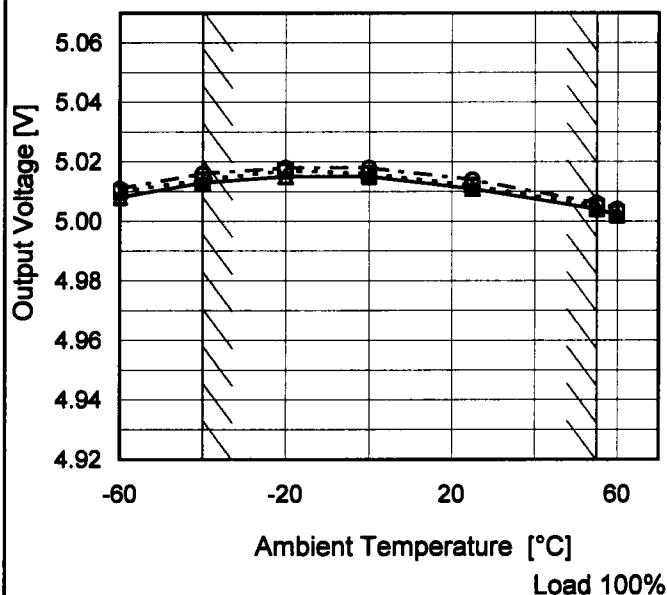
--- □--- Load 50%
 —△— Load 100%


Input Volt. 12V
Measured by 100 MHz Oscilloscope.
Note: Slanted line shows the range of the rated ambient temperature.
Testing Circuitry Figure B
2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	23	32
-40	20	29
-20	17	29
0	15	24
25	12	21
55	11	17
60	10	17
-	-	-
-	-	-
-	-	-
-	-	-

COSEL
Model SUS101205/SUCS101205
Item Ambient Temperature Drift
Object +5V2A
1. Graph

—△— Input Volt. 9V
 - - □ - - Input Volt. 12V
 - - ○ - - Input Volt. 18V



Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure A
2. Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
-60	5.008	5.010	5.011
-40	5.013	5.014	5.016
-20	5.015	5.017	5.018
0	5.015	5.016	5.018
25	5.011	5.012	5.014
55	5.004	5.005	5.006
60	5.002	5.003	5.004
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-



Model	SUS101205/SUCS101205	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+5V2A	

1. Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -40 - 55°C

Input Voltage : 9 - 18V

Load Current : 0 - 2A

* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

$$\text{* Output Voltage Accuracy (Ration)} = \frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$$

2. Values

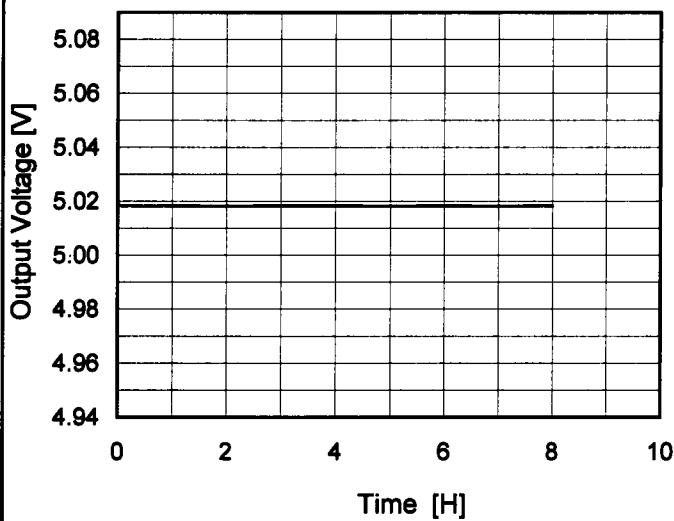
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-20	9	0	5.027	± 12	± 0.2
Minimum Voltage	55	9	2	5.004		

COSEL

Model	SUS101205/SUCS101205
Item	Time Lapse Drift
Object	+5V2A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



Input Volt. 12V
Load 100%

2. Values

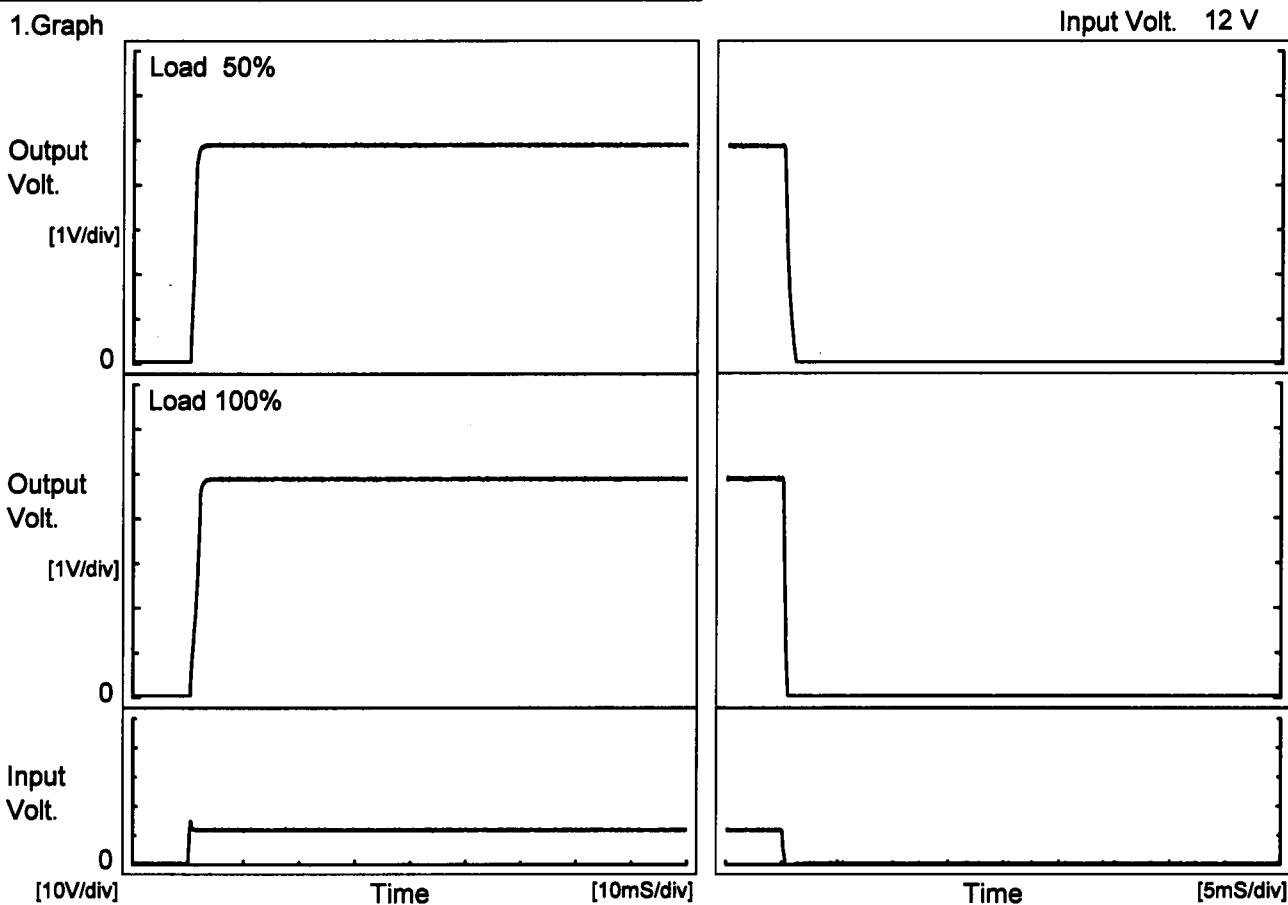
Time since start [H]	Output Voltage [V]
0.0	5.020
0.5	5.018
1.0	5.018
2.0	5.018
3.0	5.018
4.0	5.018
5.0	5.018
6.0	5.018
7.0	5.018
8.0	5.018

COSEL

Model	SUS101205/SUCS101205
Item	Rise and Fall Time
Object	+5V2A

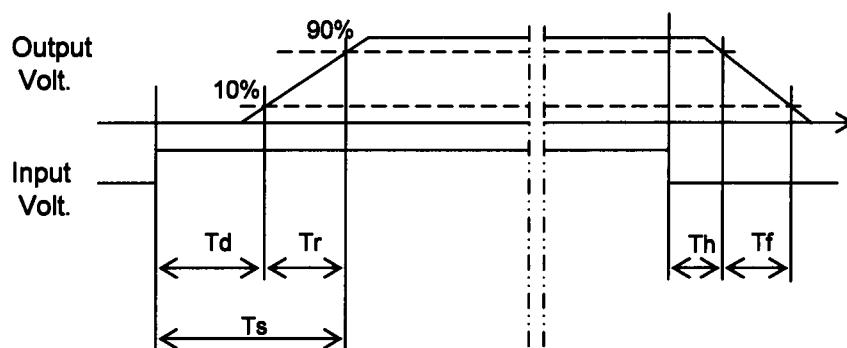
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

Load	Time	Td	Tr	Ts	Th	Tf	[mS]
50 %		0.5	1.2	1.7	0.2	0.8	
100 %		0.5	1.8	2.3	0.2	0.3	



COSEL

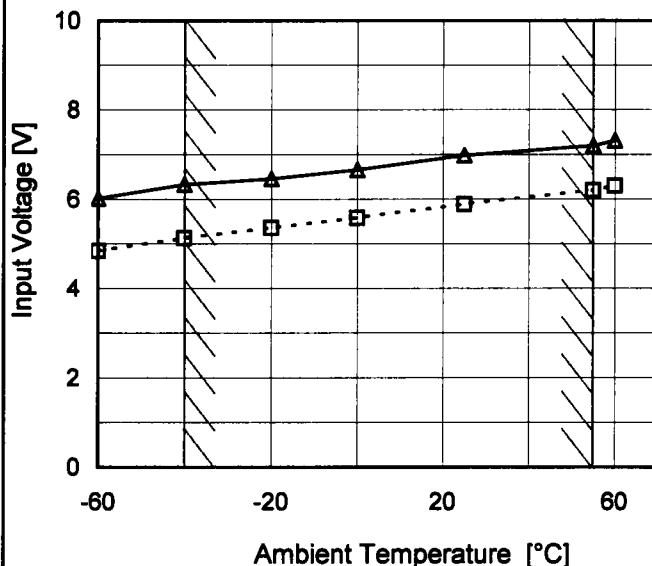
Model SUS101205/SUCS101205

Item Minimum Input Voltage
for Regulated Output Voltage

Object +5V2A

1. Graph

--- □ --- Load 50%
 —△— Load 100%



Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure A

2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	4.9	6.1
-40	5.2	6.4
-20	5.4	6.5
0	5.6	6.7
25	5.9	7.0
55	6.2	7.2
60	6.3	7.4
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

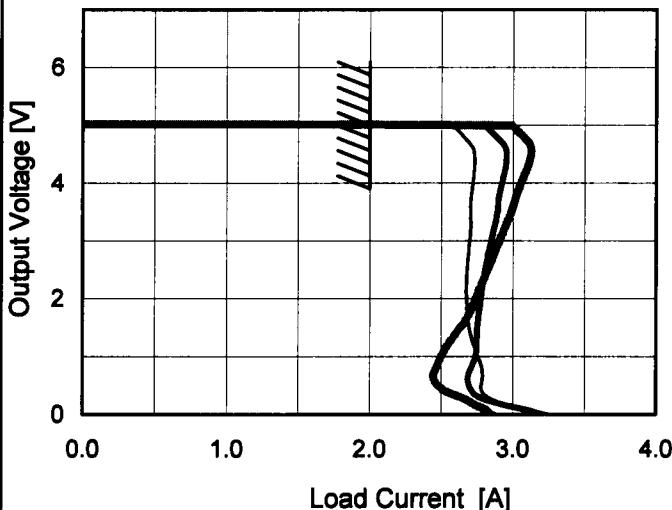
Model SUS101205/SUCS101205

Item Overcurrent Protection

Object +5V2A

1. Graph

— Input Volt. 9V
 — Input Volt. 12V
 — Input Volt. 18V



Note: Slanted line shows the range of the rated load current.

 Temperature 25°C
 Testing Circuitry Figure A

2. Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
5.00	2.38	2.41	2.99
4.75	2.67	2.91	3.10
4.50	2.73	2.95	3.12
4.00	2.72	2.92	3.06
3.50	2.71	2.89	2.99
3.00	2.70	2.85	2.90
2.50	2.68	2.81	2.83
2.00	2.68	2.78	2.74
1.50	2.70	2.75	2.63
1.00	2.76	2.74	2.50
0.50	2.78	2.69	2.48
0.00	2.96	3.26	2.89

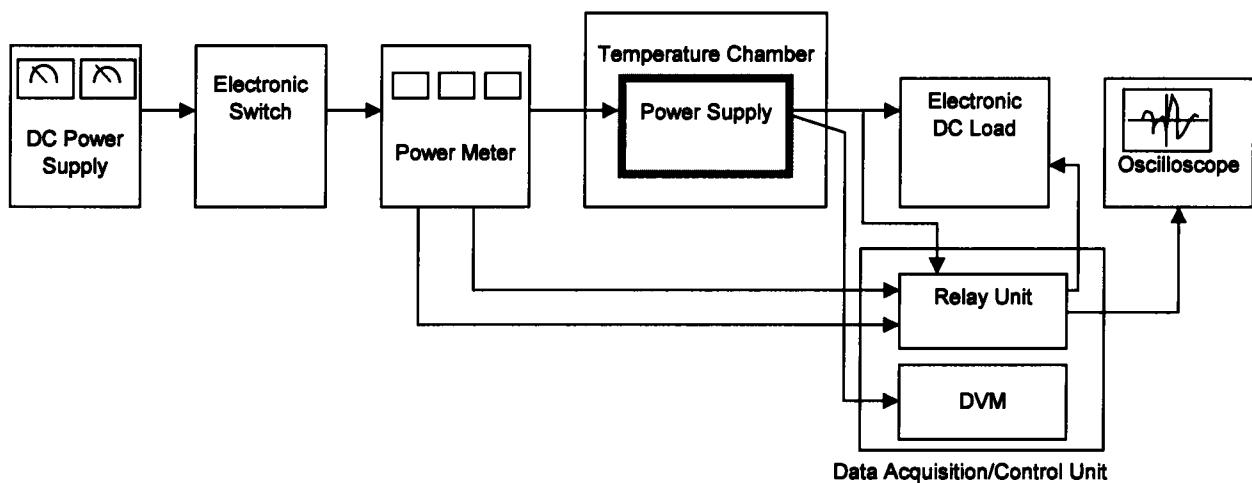


Figure A

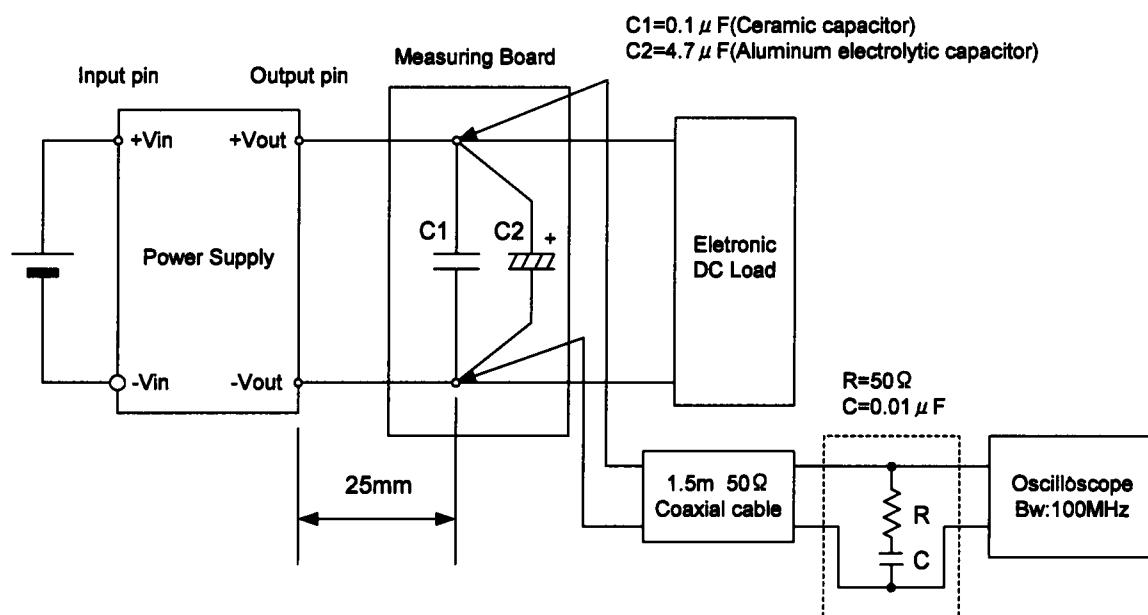


Figure B (Ripple and Ripple noise Characteristic)