



TEST DATA OF SUS100505 SUCS100505

Regulated DC Power Supply
Mar 28, 2005

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COSEL CO.,LTD.

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Model		SUS100505/SUCS100505	
Item		Input Current (by Input Voltage)	
Object			
1.Graph		2.Values	
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Model

SUS100505/SUCS100505

Item

Input Power (by Load Current)

Object

1.Graph

—△—

Input Volt.

4.5V

---□---

Input Volt.

5V

-·-○-·-

Input Volt.

9V

Input Power [W]

20.0

15.0

10.0

5.0

0.0

0.0

0.5

1.0

1.5

2.0

2.5

Load Current [A]

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

Temperature

25°C

Testing Circuitry

Figure A

2.Values

Load Current [A]	Input Power [W]		
	Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]
0.0	0.35	0.37	0.65
0.4	2.55	2.58	2.95
0.8	4.93	4.99	5.13
1.2	7.20	7.20	7.57
1.6	9.59	9.57	9.75
2.0	12.05	11.94	11.97
2.2	13.38	13.21	13.12
--	-	-	-
--	-	-	-
--	-	-	-
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- 3 -

BC-3793

COSEL

Model

SUS100505/SUCS100505

Item

Efficiency (by Input Voltage)

Object

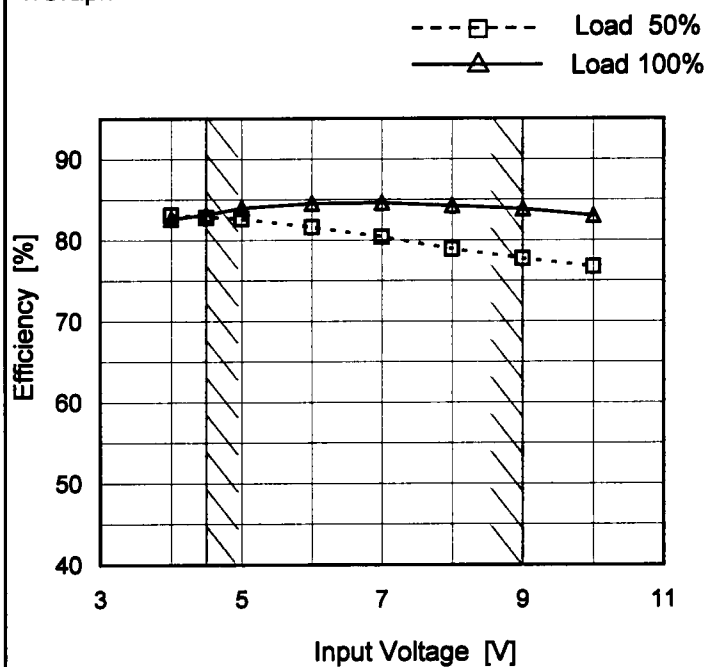
Temperature

25°C

Testing Circuitry

Figure A

1. Graph



2. Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
4.0	83.1	82.6
4.5	82.8	83.2
5.0	82.7	84.0
6.0	81.6	84.5
7.0	80.4	84.6
8.0	78.9	84.3
9.0	77.7	83.8
10.0	76.7	83.0
—	—	—

COSEL

Model		SUS100505/SUCS100505		Temperature 25°C																																																				
Item		Efficiency (by Load Current)		Testing Circuitry Figure A																																																				
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1.Graph		<div><div><div>—△—</div>Input Volt. 4.5V</div><div><div>---□---</div>Input Volt. 5V</div><div><div>---○---</div>Input Volt. 9V</div></div> <table><thead><tr><th>Load Current [A]</th><th>Input Volt. 4.5[V]</th><th>Input Volt. 5[V]</th><th>Input Volt. 9[V]</th></tr></thead><tbody><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.4</td><td>78.5</td><td>77.5</td><td>67.8</td></tr><tr><td>0.8</td><td>81.3</td><td>80.3</td><td>78.2</td></tr><tr><td>1.2</td><td>83.6</td><td>83.5</td><td>79.5</td></tr><tr><td>1.6</td><td>83.6</td><td>83.8</td><td>82.2</td></tr><tr><td>2.0</td><td>83.1</td><td>83.9</td><td>83.7</td></tr><tr><td>2.2</td><td>82.4</td><td>83.5</td><td>84.0</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> <p>Efficiency [%]</p> <p>Load Current [A]</p>		Load Current [A]	Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	0.0	-	-	-	0.4	78.5	77.5	67.8	0.8	81.3	80.3	78.2	1.2	83.6	83.5	79.5	1.6	83.6	83.8	82.2	2.0	83.1	83.9	83.7	2.2	82.4	83.5	84.0	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	2.Values				
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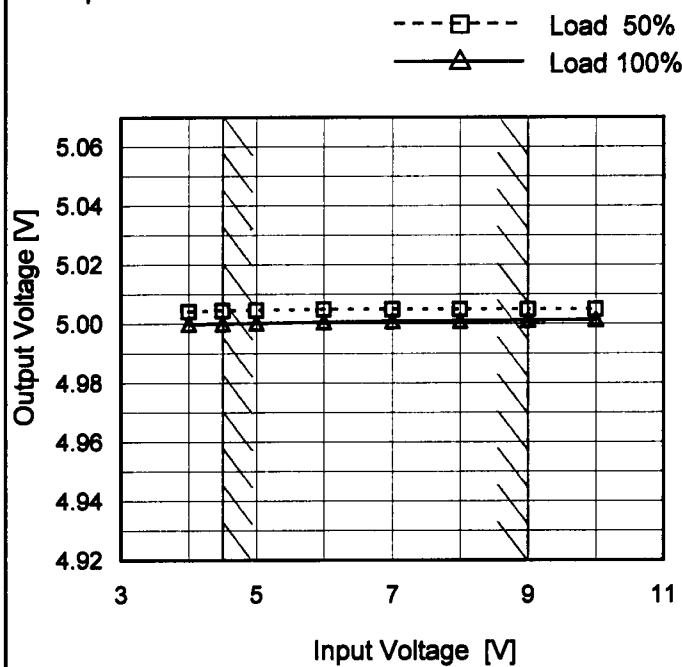
Model SUS100505/SUCS100505

Item Line Regulation

Object +5V2A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



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

2. Values

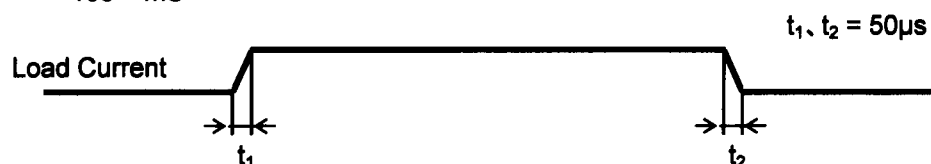
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
4.0	5.004	5.000
4.5	5.005	5.000
5.0	5.005	5.000
6.0	5.005	5.001
7.0	5.005	5.001
8.0	5.005	5.001
9.0	5.005	5.001
10.0	5.005	5.002
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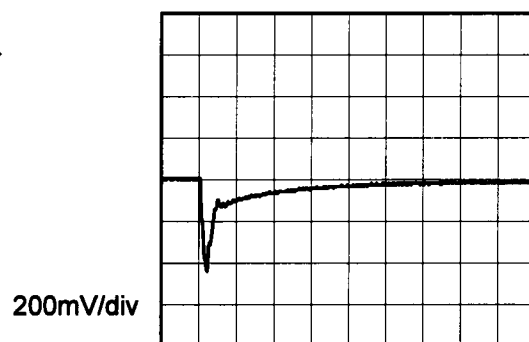
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Model	SUS100505/SUCS100505	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+5V2A		

Input Volt. 5 V
Cycle 100 mS



Min. Load (0A) \longleftrightarrow
Load 100% (2A)

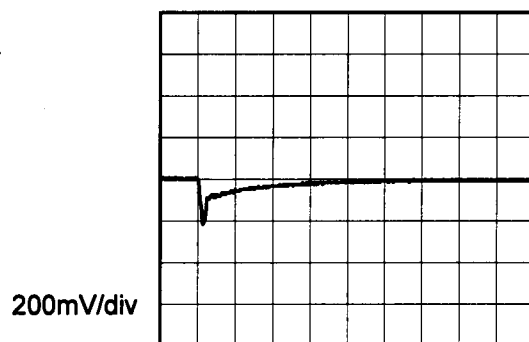


200µs/div

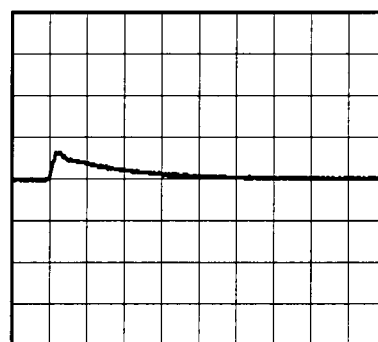


200µs/div

Min. Load (0A) \longleftrightarrow
Load 50% (1A)

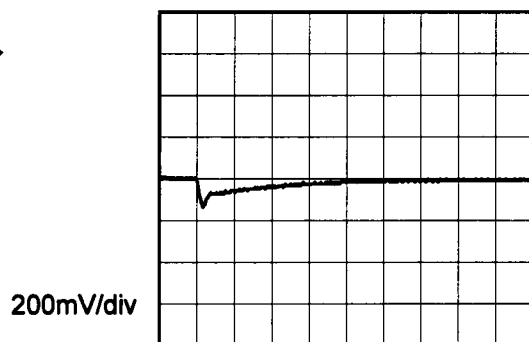


200µs/div

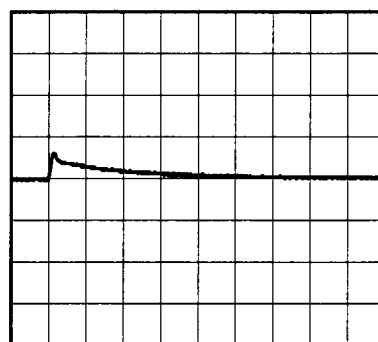


200µs/div

Load 50% (1A) \longleftrightarrow
Load 100% (2A)



200µs/div



200µs/div

COSEL

Model	SUS100505/SUCS100505	Temperature	25°C																																									
Item	Ripple Voltage (by Load Current)	Testing Circuitry	Figure B																																									
Object	+5V2A																																											
1.Graph		2.Values																																										
<div><div><div>—△— Input Volt. 4.5V</div><div>- -○- - Input Volt. 9V</div></div><div>Ripple Voltage [mV]</div><div>Load Current [A]</div></div> <div><p>Measured by 100 MHz Oscilloscope.</p><p>Ripple Voltage is shown as p-p in the figure below.</p><p>Note: Slanted line shows the range of the rated load current.</p></div> <div><div>Ripple [mVp-p]</div><div>Fig.Complex Ripple Wave Form</div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 4.5 [V]</th><th>Input Volt. 9 [V]</th></tr><tr><td>0.0</td><td>3</td><td>2</td></tr><tr><td>0.4</td><td>6</td><td>7</td></tr><tr><td>0.8</td><td>9</td><td>10</td></tr><tr><td>1.2</td><td>14</td><td>12</td></tr><tr><td>1.6</td><td>19</td><td>14</td></tr><tr><td>2.0</td><td>24</td><td>17</td></tr><tr><td>2.2</td><td>25</td><td>18</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Ripple Voltage [mV]		Input Volt. 4.5 [V]	Input Volt. 9 [V]	0.0	3	2	0.4	6	7	0.8	9	10	1.2	14	12	1.6	19	14	2.0	24	17	2.2	25	18	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																											
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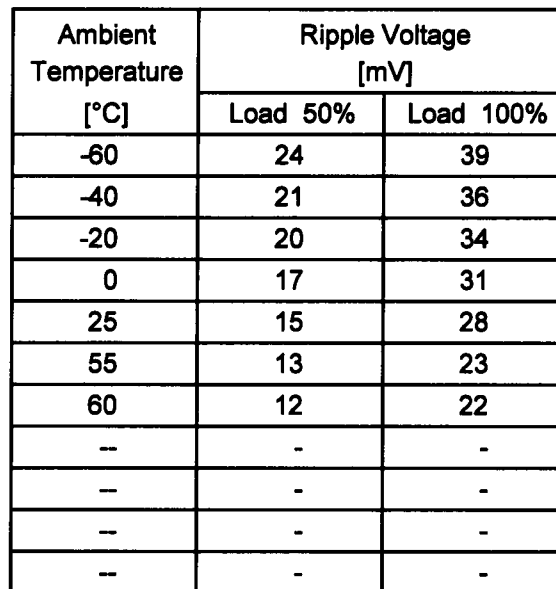
Model		SUS100505/SUCS100505																																							
Item		Ripple-Noise																																							
Object		+5V2A																																							
1.Graph		2.Values																																							
<div><div><div><div>—△—</div><div>Input Volt.</div><div>4.5V</div></div><div><div>-○-</div><div>Input Volt.</div><div>9V</div></div></div><p>Ripple-Noise [mV]</p><p>Load Current [A]</p><p>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.</p></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 4.5 [V]</th><th>Input Volt. 9 [V]</th></tr><tr><td>0.0</td><td>7</td><td>7</td></tr><tr><td>0.4</td><td>8</td><td>10</td></tr><tr><td>0.8</td><td>13</td><td>13</td></tr><tr><td>1.2</td><td>18</td><td>16</td></tr><tr><td>1.6</td><td>23</td><td>20</td></tr><tr><td>2.0</td><td>28</td><td>23</td></tr><tr><td>2.2</td><td>32</td><td>25</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Ripple-Noise [mV]		Input Volt. 4.5 [V]	Input Volt. 9 [V]	0.0	7	7	0.4	8	10	0.8	13	13	1.2	18	16	1.6	23	20	2.0	28	23	2.2	32	25	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple-Noise [mV]																																								
	Input Volt. 4.5 [V]	Input Volt. 9 [V]																																							
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<div><div><div><div><div></div><div></div></div><div>Ripple Noise[mVp-p]</div></div><p>Fig.Complex Ripple Noise Wave Form</p></div></div>																																									

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Testing Circuitry Figure B

2.Values



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

Model		SUS100505/SUCS100505		Testing Circuitry Figure A																																																		
Item		Ambient Temperature Drift																																																				
Object		+5V2A																																																				
1.Graph		<div><div>—△—</div><div>---□---</div><div>-·-○-·-</div></div> <div><div>Input Volt. 4.5V</div><div>Input Volt. 5V</div><div>Input Volt. 9V</div></div>		2.Values																																																		
<div><div>Output Voltage [V]</div><div>Ambient Temperature [°C]</div><div>Load 100%</div></div>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 5[V]</th><th>Input Volt. 9[V]</th></tr><tr><td>-60</td><td>4.999</td><td>5.000</td><td>5.001</td></tr><tr><td>-40</td><td>5.003</td><td>5.004</td><td>5.004</td></tr><tr><td>-20</td><td>5.004</td><td>5.005</td><td>5.005</td></tr><tr><td>0</td><td>5.003</td><td>5.003</td><td>5.004</td></tr><tr><td>25</td><td>4.999</td><td>4.998</td><td>4.999</td></tr><tr><td>55</td><td>4.992</td><td>4.992</td><td>4.993</td></tr><tr><td>60</td><td>4.991</td><td>4.990</td><td>4.991</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></table>		Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	-60	4.999	5.000	5.001	-40	5.003	5.004	5.004	-20	5.004	5.005	5.005	0	5.003	5.003	5.004	25	4.999	4.998	4.999	55	4.992	4.992	4.993	60	4.991	4.990	4.991	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																					
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Note: Sianted line shows the range of the rated ambient temperature.																																																						

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		Testing Circuitry Figure A
Model	SUS100505/SUCS100505	
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 : 4.5 - 9V

Load Current : 0 - 2A

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

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

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	-20	4.5	0	5.011	±10	±0.2
Minimum Voltage	55	5	2	4.992		

COSEL

Model	SUS100505/SUCS100505																								
Item	Time Lapse Drift																								
Object	+5V2A																								
1.Graph		2.Values																							
<div><div><div>5.06</div><div>5.04</div><div>5.02</div><div>5.00</div><div>4.98</div><div>4.96</div><div>4.94</div><div>4.92</div></div><div><div>0</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div><div><div>Output Voltage [V]</div><div>Time [H]</div></div><div><div>Input Volt.5V</div><div>Load100%</div></div></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>5.005</td></tr><tr><td>0.5</td><td>5.004</td></tr><tr><td>1.0</td><td>5.004</td></tr><tr><td>2.0</td><td>5.004</td></tr><tr><td>3.0</td><td>5.004</td></tr><tr><td>4.0</td><td>5.004</td></tr><tr><td>5.0</td><td>5.004</td></tr><tr><td>6.0</td><td>5.004</td></tr><tr><td>7.0</td><td>5.004</td></tr><tr><td>8.0</td><td>5.004</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	5.005	0.5	5.004	1.0	5.004	2.0	5.004	3.0	5.004	4.0	5.004	5.0	5.004	6.0	5.004	7.0	5.004	8.0	5.004
Time since start [H]	Output Voltage [V]																								
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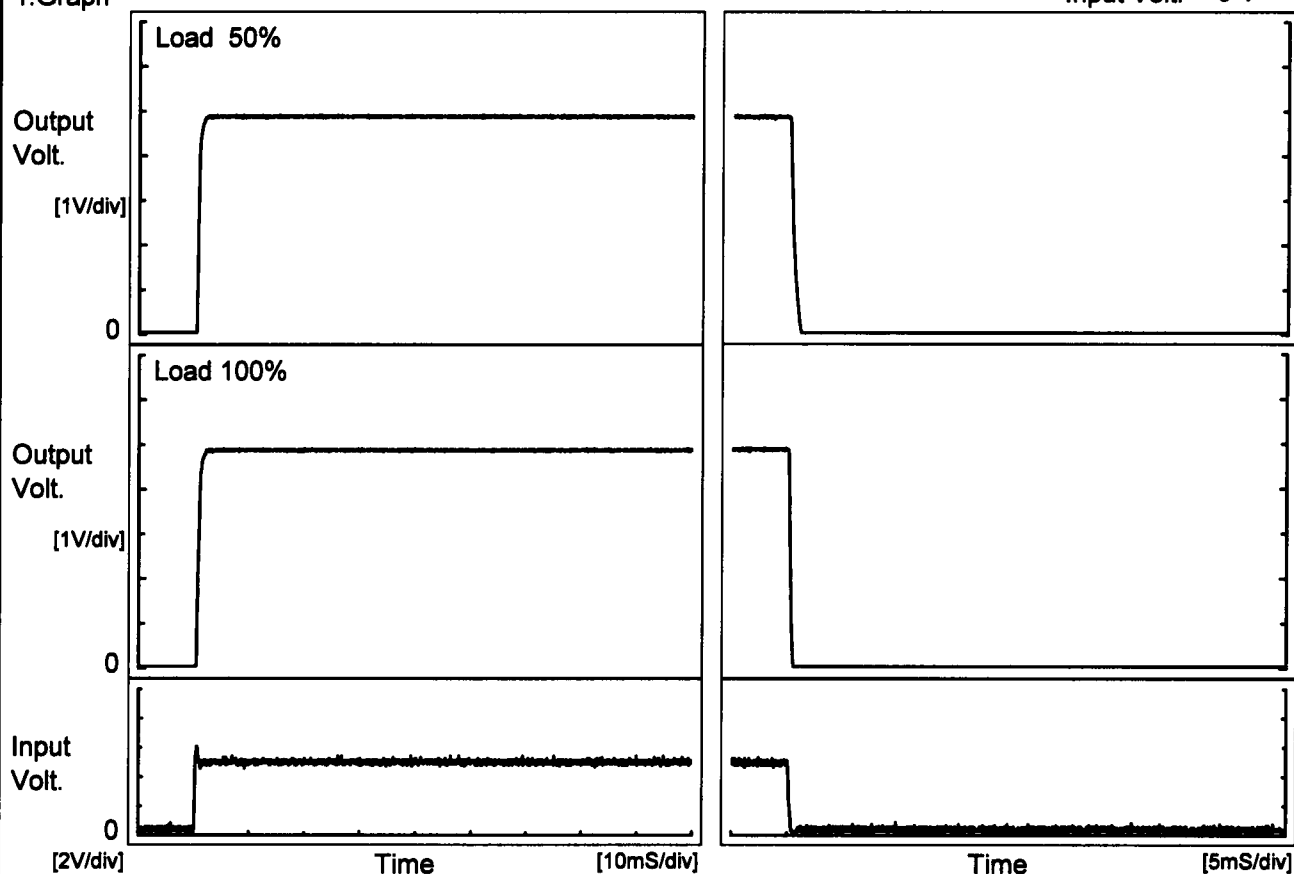
BC-3793

COSEL

Model	SUS100505/SUCS100505	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+5V2A		

1. Graph

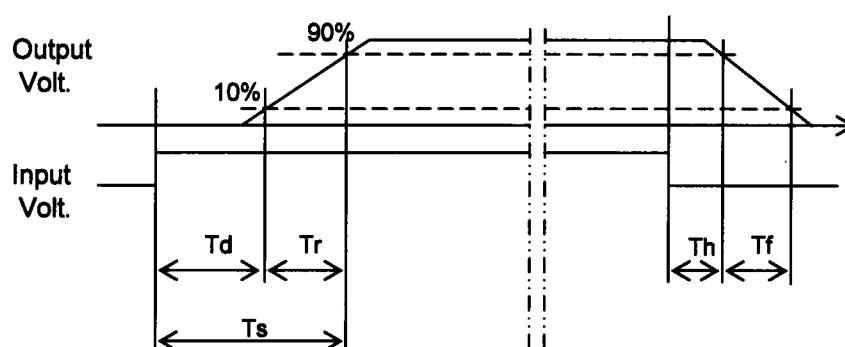
Input Volt. 5 V



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.5	0.9	1.4	0.2	0.7
100 %	0.5	1.0	1.5	0.1	0.3



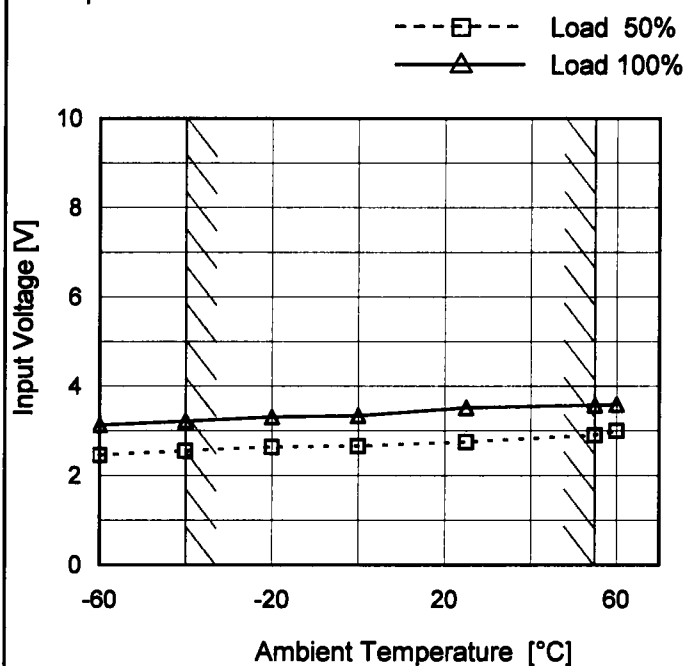
Model SUS100505/SUCS100505

Item Minimum Input Voltage
for Regulated Output Voltage

Object +5V2A

Testing Circuitry Figure A

1. Graph



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

2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	2.5	3.2
-40	2.6	3.3
-20	2.7	3.4
0	2.7	3.4
25	2.8	3.6
55	2.9	3.6
60	3.0	3.6
—	—	—
—	—	—
—	—	—
—	—	—

Model		SUS100505/SUCS100505																																																								
Item		Overcurrent Protection																																																								
Object		+5V2A																																																								
1.Graph		2.Values																																																								
<div><div><div></div><div></div><div></div></div><div><div>Input Volt.</div><div>Input Volt.</div><div>Input Volt.</div></div><div><div>4.5V</div><div>5V</div><div>9V</div></div></div> <div><p>Output Voltage [V]</p><p>Load Current [A]</p><p>Note: Slanted line shows the range of the rated load current.</p></div>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 5[V]</th><th>Input Volt. 9[V]</th></tr><tr><td>5.00</td><td>2.31</td><td>2.39</td><td>2.66</td></tr><tr><td>4.75</td><td>2.38</td><td>2.48</td><td>2.80</td></tr><tr><td>4.50</td><td>2.41</td><td>2.50</td><td>2.82</td></tr><tr><td>4.00</td><td>2.40</td><td>2.48</td><td>2.75</td></tr><tr><td>3.50</td><td>2.39</td><td>2.45</td><td>2.68</td></tr><tr><td>3.00</td><td>2.38</td><td>2.45</td><td>2.63</td></tr><tr><td>2.50</td><td>2.39</td><td>2.46</td><td>2.60</td></tr><tr><td>2.00</td><td>2.43</td><td>2.49</td><td>2.57</td></tr><tr><td>1.50</td><td>2.48</td><td>2.55</td><td>2.53</td></tr><tr><td>1.00</td><td>2.59</td><td>2.65</td><td>2.51</td></tr><tr><td>0.50</td><td>2.75</td><td>2.78</td><td>2.56</td></tr><tr><td>0.00</td><td>3.29</td><td>3.36</td><td>3.03</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	5.00	2.31	2.39	2.66	4.75	2.38	2.48	2.80	4.50	2.41	2.50	2.82	4.00	2.40	2.48	2.75	3.50	2.39	2.45	2.68	3.00	2.38	2.45	2.63	2.50	2.39	2.46	2.60	2.00	2.43	2.49	2.57	1.50	2.48	2.55	2.53	1.00	2.59	2.65	2.51	0.50	2.75	2.78	2.56	0.00	3.29	3.36	3.03
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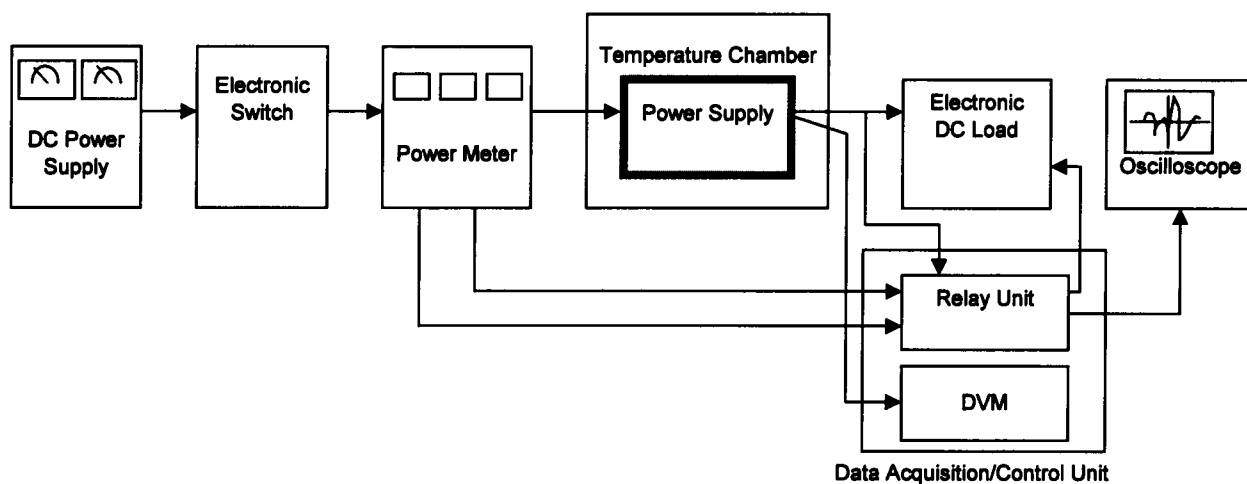


Figure A

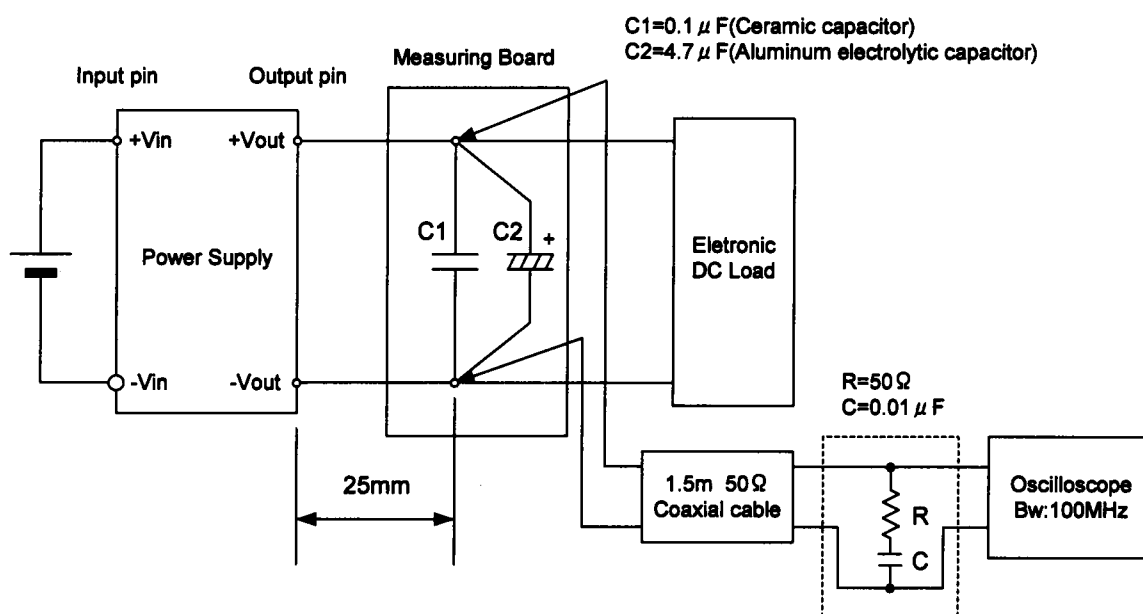


Figure B(Ripple and Ripple noise Characteristic)