

TEST DATA OF SUTS102405

Regulated DC Power Supply
February 12, 2009

Approved by : Kazunari Asano
Kazunari Asano Design Manager

Prepared by : Sho Saito
Sho Saito Design Engineer

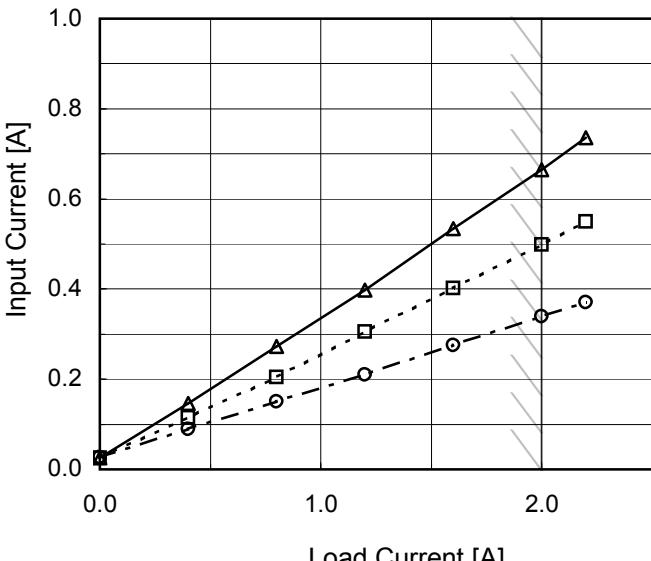
COSEL CO.,LTD.

CONTENTS

1.Input Current (by Input Voltage) · · · · ·	1
2.Input Current (by Load Current) · · · · ·	2
3.Input Power (by Load Current) · · · · ·	3
4.Efficiency (by Input Voltage) · · · · ·	4
5.Efficiency (by Load Current) · · · · ·	5
6.Line Regulation · · · · ·	6
7.Load Regulation · · · · ·	7
8.Dynamic Load Response · · · · ·	8
9.Ripple Voltage (by Load Current) · · · · ·	9
10.Ripple-Noise · · · · ·	10
11.Ripple Voltage (by Ambient Temperature) · · · · ·	11
12.Ambient Temperature Drift · · · · ·	12
13.Output Voltage Accuracy · · · · ·	13
14.Time Lapse Drift · · · · ·	14
15.Rise and Fall Time · · · · ·	15
16.Minimum Input Voltage for Regulated Output Voltage · · · · ·	16
17.Overcurrent Protection · · · · ·	17
18.Figure of Testing Circuitry · · · · ·	18

(Final Page 18)

Model	SUTS102405	Temperature Testing Circuitry 25°C Figure A																																																																																	
Item	Input Current (by Input Voltage)																																																																																		
Object	_____	2.Values																																																																																	
1.Graph	<p style="text-align: center;"> —△— Load 100% ---□--- Load 50% ---○--- Load 0% </p> <p>Note: Slanted line shows the range of the rated input voltage.</p>	<table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="3">Input Current [A]</th> </tr> <tr> <th>Load 0%</th> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.000</td><td>0.000</td><td>0.000</td></tr> <tr><td>4.0</td><td>0.000</td><td>0.000</td><td>0.000</td></tr> <tr><td>8.0</td><td>0.001</td><td>0.000</td><td>0.000</td></tr> <tr><td>12.0</td><td>0.001</td><td>0.001</td><td>0.001</td></tr> <tr><td>13.6</td><td>0.001</td><td>0.001</td><td>0.001</td></tr> <tr><td>14.8</td><td>0.025</td><td>0.403</td><td>0.812</td></tr> <tr><td>16.0</td><td>0.024</td><td>0.372</td><td>0.750</td></tr> <tr><td>18.0</td><td>0.024</td><td>0.334</td><td>0.662</td></tr> <tr><td>20.0</td><td>0.025</td><td>0.302</td><td>0.594</td></tr> <tr><td>24.0</td><td>0.025</td><td>0.257</td><td>0.495</td></tr> <tr><td>28.0</td><td>0.026</td><td>0.220</td><td>0.427</td></tr> <tr><td>32.0</td><td>0.027</td><td>0.193</td><td>0.375</td></tr> <tr><td>33.2</td><td>0.026</td><td>0.187</td><td>0.365</td></tr> <tr><td>34.0</td><td>0.028</td><td>0.184</td><td>0.354</td></tr> <tr><td>36.0</td><td>0.027</td><td>0.177</td><td>0.337</td></tr> <tr><td>40.0</td><td>0.027</td><td>0.164</td><td>0.307</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>			Input Voltage [V]	Input Current [A]			Load 0%	Load 50%	Load 100%	0.0	0.000	0.000	0.000	4.0	0.000	0.000	0.000	8.0	0.001	0.000	0.000	12.0	0.001	0.001	0.001	13.6	0.001	0.001	0.001	14.8	0.025	0.403	0.812	16.0	0.024	0.372	0.750	18.0	0.024	0.334	0.662	20.0	0.025	0.302	0.594	24.0	0.025	0.257	0.495	28.0	0.026	0.220	0.427	32.0	0.027	0.193	0.375	33.2	0.026	0.187	0.365	34.0	0.028	0.184	0.354	36.0	0.027	0.177	0.337	40.0	0.027	0.164	0.307	--	-	-	-	--	-	-	-
Input Voltage [V]	Input Current [A]																																																																																		
	Load 0%	Load 50%	Load 100%																																																																																
0.0	0.000	0.000	0.000																																																																																
4.0	0.000	0.000	0.000																																																																																
8.0	0.001	0.000	0.000																																																																																
12.0	0.001	0.001	0.001																																																																																
13.6	0.001	0.001	0.001																																																																																
14.8	0.025	0.403	0.812																																																																																
16.0	0.024	0.372	0.750																																																																																
18.0	0.024	0.334	0.662																																																																																
20.0	0.025	0.302	0.594																																																																																
24.0	0.025	0.257	0.495																																																																																
28.0	0.026	0.220	0.427																																																																																
32.0	0.027	0.193	0.375																																																																																
33.2	0.026	0.187	0.365																																																																																
34.0	0.028	0.184	0.354																																																																																
36.0	0.027	0.177	0.337																																																																																
40.0	0.027	0.164	0.307																																																																																
--	-	-	-																																																																																
--	-	-	-																																																																																

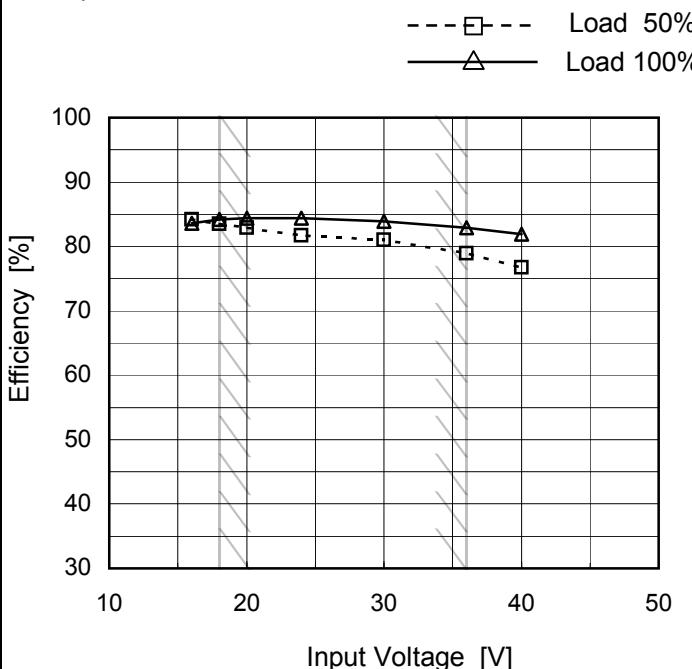
Model	SUTS102405	Temperature	25°C																																																			
Item	Input Current (by Load Current)	Testing Circuitry	Figure A																																																			
Object	_____																																																					
1.Graph		2.Values																																																				
<p>—△— Input Volt. 18V - - -□- - Input Volt. 24V - - ○- - Input Volt. 36V</p> 		<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input Current [A]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.025</td><td>0.025</td><td>0.027</td></tr> <tr><td>0.4</td><td>0.147</td><td>0.115</td><td>0.089</td></tr> <tr><td>0.8</td><td>0.273</td><td>0.205</td><td>0.150</td></tr> <tr><td>1.2</td><td>0.398</td><td>0.306</td><td>0.210</td></tr> <tr><td>1.6</td><td>0.534</td><td>0.401</td><td>0.276</td></tr> <tr><td>2.0</td><td>0.664</td><td>0.498</td><td>0.339</td></tr> <tr><td>2.2</td><td>0.735</td><td>0.550</td><td>0.371</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]	Input Current [A]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.0	0.025	0.025	0.027	0.4	0.147	0.115	0.089	0.8	0.273	0.205	0.150	1.2	0.398	0.306	0.210	1.6	0.534	0.401	0.276	2.0	0.664	0.498	0.339	2.2	0.735	0.550	0.371	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Current [A]																																																					
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																			
0.0	0.025	0.025	0.027																																																			
0.4	0.147	0.115	0.089																																																			
0.8	0.273	0.205	0.150																																																			
1.2	0.398	0.306	0.210																																																			
1.6	0.534	0.401	0.276																																																			
2.0	0.664	0.498	0.339																																																			
2.2	0.735	0.550	0.371																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
<p>Note: Slanted line shows the range of the rated load current.</p>																																																						

Model	SUTS102405																																																					
Item	Input Power (by Load Current)	Temperature Testing Circuitry	25°C Figure A																																																			
Object																																																						
1.Graph	<p>—△— Input Volt. 18V - - -□- - Input Volt. 24V - - ○ - - Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from the graph</caption> <thead> <tr> <th>Load Current [A]</th> <th>18V [W]</th> <th>24V [W]</th> <th>36V [W]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.45</td><td>0.60</td><td>0.96</td></tr> <tr><td>0.4</td><td>2.63</td><td>2.75</td><td>3.21</td></tr> <tr><td>0.8</td><td>4.91</td><td>4.90</td><td>5.40</td></tr> <tr><td>1.2</td><td>7.18</td><td>7.31</td><td>7.54</td></tr> <tr><td>1.6</td><td>9.53</td><td>9.60</td><td>9.92</td></tr> <tr><td>2.0</td><td>11.96</td><td>11.94</td><td>12.17</td></tr> <tr><td>2.2</td><td>13.23</td><td>13.12</td><td>13.32</td></tr> </tbody> </table>			Load Current [A]	18V [W]	24V [W]	36V [W]	0.0	0.45	0.60	0.96	0.4	2.63	2.75	3.21	0.8	4.91	4.90	5.40	1.2	7.18	7.31	7.54	1.6	9.53	9.60	9.92	2.0	11.96	11.94	12.17	2.2	13.23	13.12	13.32																			
Load Current [A]	18V [W]	24V [W]	36V [W]																																																			
0.0	0.45	0.60	0.96																																																			
0.4	2.63	2.75	3.21																																																			
0.8	4.91	4.90	5.40																																																			
1.2	7.18	7.31	7.54																																																			
1.6	9.53	9.60	9.92																																																			
2.0	11.96	11.94	12.17																																																			
2.2	13.23	13.12	13.32																																																			
2.Values	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input Power [W]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.45</td><td>0.60</td><td>0.96</td></tr> <tr><td>0.4</td><td>2.63</td><td>2.75</td><td>3.21</td></tr> <tr><td>0.8</td><td>4.91</td><td>4.90</td><td>5.40</td></tr> <tr><td>1.2</td><td>7.18</td><td>7.31</td><td>7.54</td></tr> <tr><td>1.6</td><td>9.53</td><td>9.60</td><td>9.92</td></tr> <tr><td>2.0</td><td>11.96</td><td>11.94</td><td>12.17</td></tr> <tr><td>2.2</td><td>13.23</td><td>13.12</td><td>13.32</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]	Input Power [W]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.0	0.45	0.60	0.96	0.4	2.63	2.75	3.21	0.8	4.91	4.90	5.40	1.2	7.18	7.31	7.54	1.6	9.53	9.60	9.92	2.0	11.96	11.94	12.17	2.2	13.23	13.12	13.32	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Power [W]																																																					
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																			
0.0	0.45	0.60	0.96																																																			
0.4	2.63	2.75	3.21																																																			
0.8	4.91	4.90	5.40																																																			
1.2	7.18	7.31	7.54																																																			
1.6	9.53	9.60	9.92																																																			
2.0	11.96	11.94	12.17																																																			
2.2	13.23	13.12	13.32																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Note:	Slanted line shows the range of the rated load current.																																																					

Model	SUTS102405
Item	Efficiency (by Input Voltage)
Object	—

Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

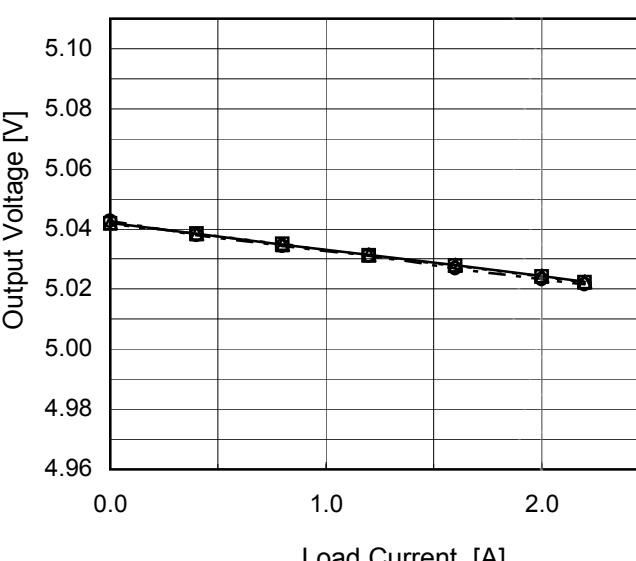
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
16	84.2	83.6
18	83.5	84.2
20	82.9	84.4
24	81.8	84.4
30	81.0	83.9
36	79.0	82.9
40	76.7	81.9
--	-	-
--	-	-

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

Model	SUTS102405	Temperature Testing Circuitry 25°C Figure A																																																			
Item	Efficiency (by Load Current)																																																				
Object	_____																																																				
1.Graph	<p>—△— Input Volt. 18V - - -□--- Input Volt. 24V - - ○--- Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from Graph</caption> <thead> <tr> <th>Load Current [A]</th> <th>Efficiency [18V] (%)</th> <th>Efficiency [24V] (%)</th> <th>Efficiency [36V] (%)</th> </tr> </thead> <tbody> <tr><td>0.4</td><td>76.6</td><td>73.4</td><td>62.8</td></tr> <tr><td>0.8</td><td>82.1</td><td>82.4</td><td>74.7</td></tr> <tr><td>1.2</td><td>84.2</td><td>82.8</td><td>80.2</td></tr> <tr><td>1.6</td><td>84.6</td><td>84.0</td><td>81.3</td></tr> <tr><td>2.0</td><td>84.2</td><td>84.3</td><td>82.7</td></tr> <tr><td>2.2</td><td>83.7</td><td>84.4</td><td>83.2</td></tr> </tbody> </table>	Load Current [A]	Efficiency [18V] (%)	Efficiency [24V] (%)	Efficiency [36V] (%)	0.4	76.6	73.4	62.8	0.8	82.1	82.4	74.7	1.2	84.2	82.8	80.2	1.6	84.6	84.0	81.3	2.0	84.2	84.3	82.7	2.2	83.7	84.4	83.2																								
Load Current [A]	Efficiency [18V] (%)	Efficiency [24V] (%)	Efficiency [36V] (%)																																																		
0.4	76.6	73.4	62.8																																																		
0.8	82.1	82.4	74.7																																																		
1.2	84.2	82.8	80.2																																																		
1.6	84.6	84.0	81.3																																																		
2.0	84.2	84.3	82.7																																																		
2.2	83.7	84.4	83.2																																																		
2.Values																																																					
	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Efficiency [%]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>0.4</td><td>76.6</td><td>73.4</td><td>62.8</td></tr> <tr><td>0.8</td><td>82.1</td><td>82.4</td><td>74.7</td></tr> <tr><td>1.2</td><td>84.2</td><td>82.8</td><td>80.2</td></tr> <tr><td>1.6</td><td>84.6</td><td>84.0</td><td>81.3</td></tr> <tr><td>2.0</td><td>84.2</td><td>84.3</td><td>82.7</td></tr> <tr><td>2.2</td><td>83.7</td><td>84.4</td><td>83.2</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]	Efficiency [%]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.0	-	-	-	0.4	76.6	73.4	62.8	0.8	82.1	82.4	74.7	1.2	84.2	82.8	80.2	1.6	84.6	84.0	81.3	2.0	84.2	84.3	82.7	2.2	83.7	84.4	83.2	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	
Load Current [A]	Efficiency [%]																																																				
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																		
0.0	-	-	-																																																		
0.4	76.6	73.4	62.8																																																		
0.8	82.1	82.4	74.7																																																		
1.2	84.2	82.8	80.2																																																		
1.6	84.6	84.0	81.3																																																		
2.0	84.2	84.3	82.7																																																		
2.2	83.7	84.4	83.2																																																		
--	-	-	-																																																		
--	-	-	-																																																		
--	-	-	-																																																		
--	-	-	-																																																		

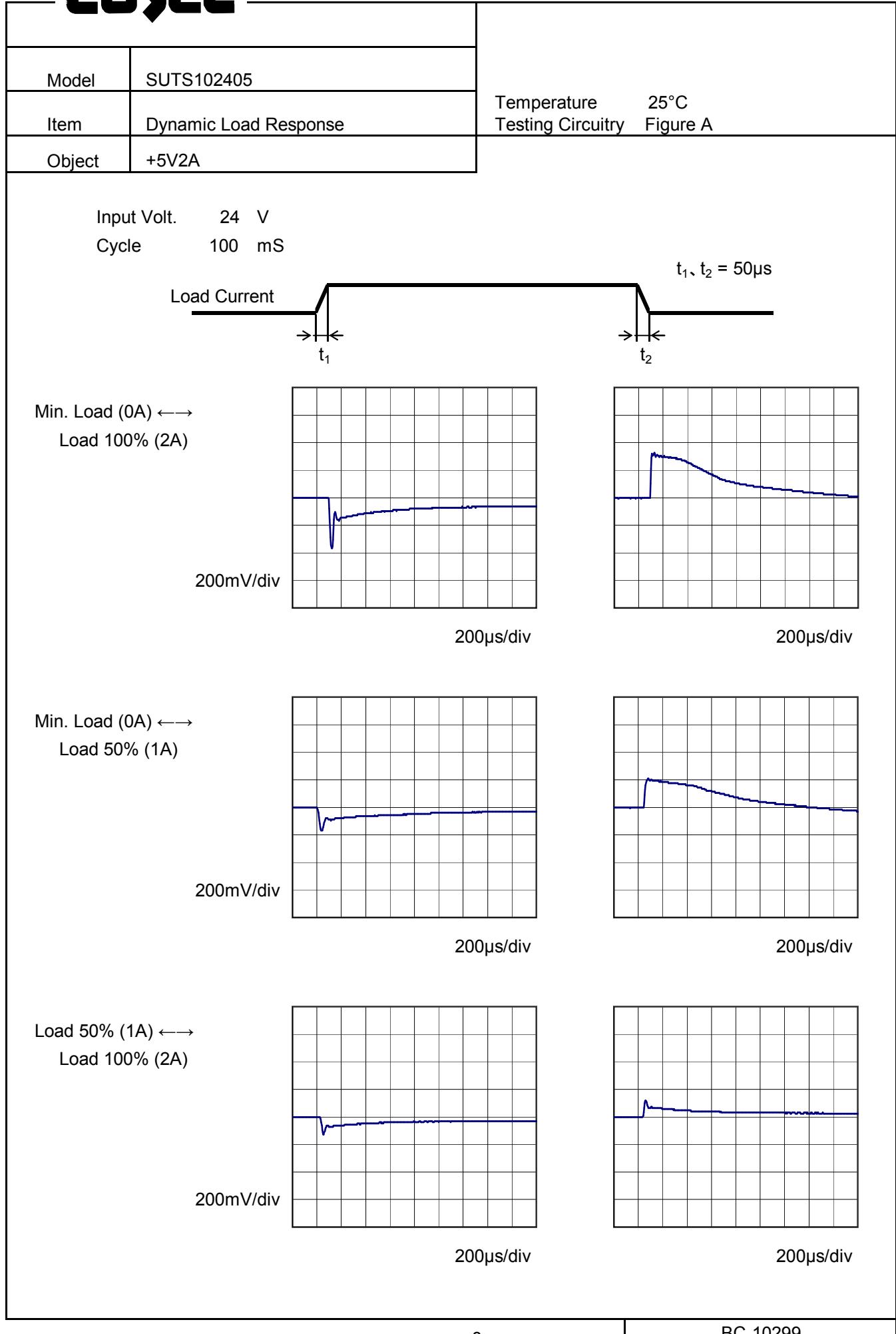
Note: Slanted line shows the range of the rated load current.

Model	SUTS102405	Temperature Testing Circuitry 25°C Figure A																																	
Item	Line Regulation																																		
Object	+5V2A																																		
1. Graph		2. Values																																	
<p>Output Voltage [V]</p> <p>Input Voltage [V]</p> <p>Legend: - - - □ - - - Load 50% — △ — Load 100%</p>																																			
<p>Note: Slanted line shows the range of the rated input voltage.</p>		<table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Output Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>5.033</td> <td>5.024</td> </tr> <tr> <td>18</td> <td>5.033</td> <td>5.024</td> </tr> <tr> <td>20</td> <td>5.033</td> <td>5.024</td> </tr> <tr> <td>24</td> <td>5.033</td> <td>5.024</td> </tr> <tr> <td>30</td> <td>5.033</td> <td>5.024</td> </tr> <tr> <td>36</td> <td>5.033</td> <td>5.024</td> </tr> <tr> <td>40</td> <td>5.032</td> <td>5.023</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Input Voltage [V]	Output Voltage [V]		Load 50%	Load 100%	16	5.033	5.024	18	5.033	5.024	20	5.033	5.024	24	5.033	5.024	30	5.033	5.024	36	5.033	5.024	40	5.032	5.023	--	-	-	--	-	-	
Input Voltage [V]	Output Voltage [V]																																		
	Load 50%	Load 100%																																	
16	5.033	5.024																																	
18	5.033	5.024																																	
20	5.033	5.024																																	
24	5.033	5.024																																	
30	5.033	5.024																																	
36	5.033	5.024																																	
40	5.032	5.023																																	
--	-	-																																	
--	-	-																																	

Model	SUTS102405	Temperature Testing Circuitry 25°C Figure A																																																					
Item	Load Regulation																																																						
Object	+5V2A																																																						
1.Graph	<p style="text-align: center;"> —△— Input Volt. 18V ---□--- Input Volt. 24V ---○--- Input Volt. 36V </p>  <p>The graph plots Output Voltage [V] on the y-axis (from 4.96 to 5.10) against Load Current [A] on the x-axis (from 0.0 to 2.0). Three data series are shown for input voltages of 18V, 24V, and 36V. Each series consists of data points connected by straight lines. A slanted line is drawn across the graph, representing the rated load current range.</p> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Output Volt. 18[V]</th> <th>Output Volt. 24[V]</th> <th>Output Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.042</td><td>5.042</td><td>5.043</td></tr> <tr><td>0.4</td><td>5.038</td><td>5.038</td><td>5.038</td></tr> <tr><td>0.8</td><td>5.035</td><td>5.035</td><td>5.034</td></tr> <tr><td>1.2</td><td>5.031</td><td>5.031</td><td>5.031</td></tr> <tr><td>1.6</td><td>5.028</td><td>5.028</td><td>5.027</td></tr> <tr><td>2.0</td><td>5.024</td><td>5.024</td><td>5.023</td></tr> <tr><td>2.2</td><td>5.023</td><td>5.022</td><td>5.022</td></tr> </tbody> </table>	Load Current [A]	Output Volt. 18[V]	Output Volt. 24[V]	Output Volt. 36[V]	0.0	5.042	5.042	5.043	0.4	5.038	5.038	5.038	0.8	5.035	5.035	5.034	1.2	5.031	5.031	5.031	1.6	5.028	5.028	5.027	2.0	5.024	5.024	5.023	2.2	5.023	5.022	5.022																						
Load Current [A]	Output Volt. 18[V]	Output Volt. 24[V]	Output Volt. 36[V]																																																				
0.0	5.042	5.042	5.043																																																				
0.4	5.038	5.038	5.038																																																				
0.8	5.035	5.035	5.034																																																				
1.2	5.031	5.031	5.031																																																				
1.6	5.028	5.028	5.027																																																				
2.0	5.024	5.024	5.023																																																				
2.2	5.023	5.022	5.022																																																				
2.Values																																																							
	<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.042</td><td>5.042</td><td>5.043</td></tr> <tr><td>0.4</td><td>5.038</td><td>5.038</td><td>5.038</td></tr> <tr><td>0.8</td><td>5.035</td><td>5.035</td><td>5.034</td></tr> <tr><td>1.2</td><td>5.031</td><td>5.031</td><td>5.031</td></tr> <tr><td>1.6</td><td>5.028</td><td>5.028</td><td>5.027</td></tr> <tr><td>2.0</td><td>5.024</td><td>5.024</td><td>5.023</td></tr> <tr><td>2.2</td><td>5.023</td><td>5.022</td><td>5.022</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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.0	5.042	5.042	5.043	0.4	5.038	5.038	5.038	0.8	5.035	5.035	5.034	1.2	5.031	5.031	5.031	1.6	5.028	5.028	5.027	2.0	5.024	5.024	5.023	2.2	5.023	5.022	5.022	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Output Voltage [V]																																																						
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																				
0.0	5.042	5.042	5.043																																																				
0.4	5.038	5.038	5.038																																																				
0.8	5.035	5.035	5.034																																																				
1.2	5.031	5.031	5.031																																																				
1.6	5.028	5.028	5.027																																																				
2.0	5.024	5.024	5.023																																																				
2.2	5.023	5.022	5.022																																																				
--	-	-	-																																																				
--	-	-	-																																																				
--	-	-	-																																																				
--	-	-	-																																																				

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

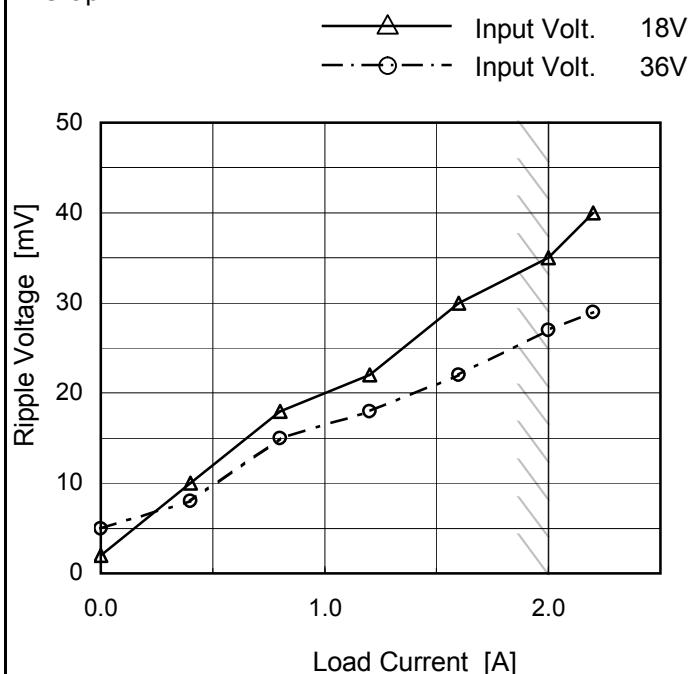
COSEL



Model	SUTS102405
Item	Ripple Voltage (by Load Current)
Object	+5V2A

Temperature 25°C
Testing Circuitry Figure B

1. Graph



2. Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 18 [V]	Input Volt. 36 [V]
0.0	2	5
0.4	10	8
0.8	14	14
1.2	18	16
1.6	21	17
2.0	26	19
2.2	29	20
--	-	-
--	-	-
--	-	-
--	-	-

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

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

Ripple [mVp-p]

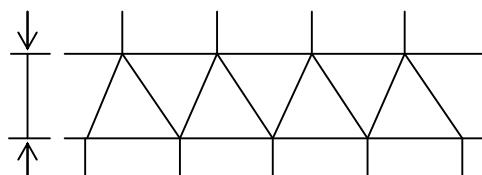
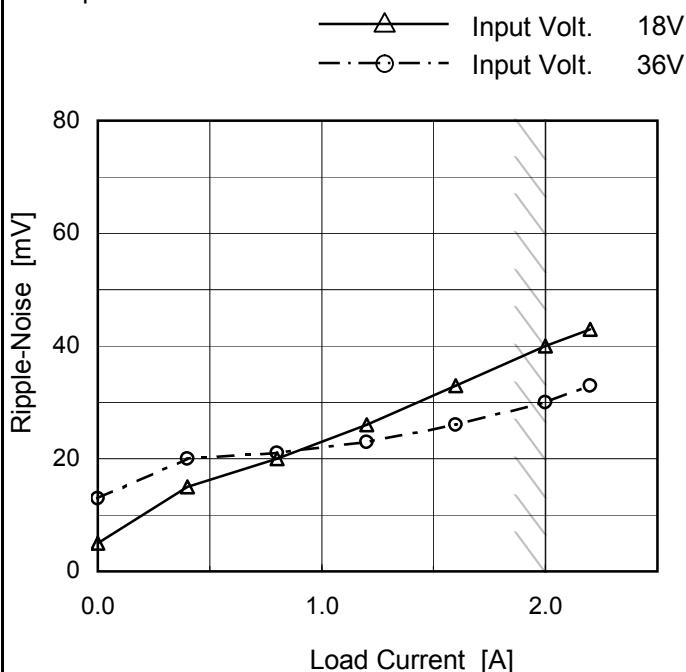


Fig.Complex Ripple Wave Form

Model	SUTS102405
Item	Ripple-Noise
Object	+5V2A

Temperature 25°C
Testing Circuitry Figure B

1. Graph



Measured by 150 MHz Oscilloscope.

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

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

2. Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 18 [V]	Input Volt. 36 [V]
0.0	5	13
0.4	15	20
0.8	20	21
1.2	26	23
1.6	33	26
2.0	40	30
2.2	43	33
--	-	-
--	-	-
--	-	-
--	-	-

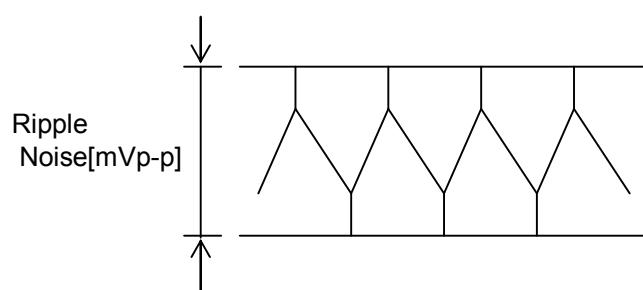
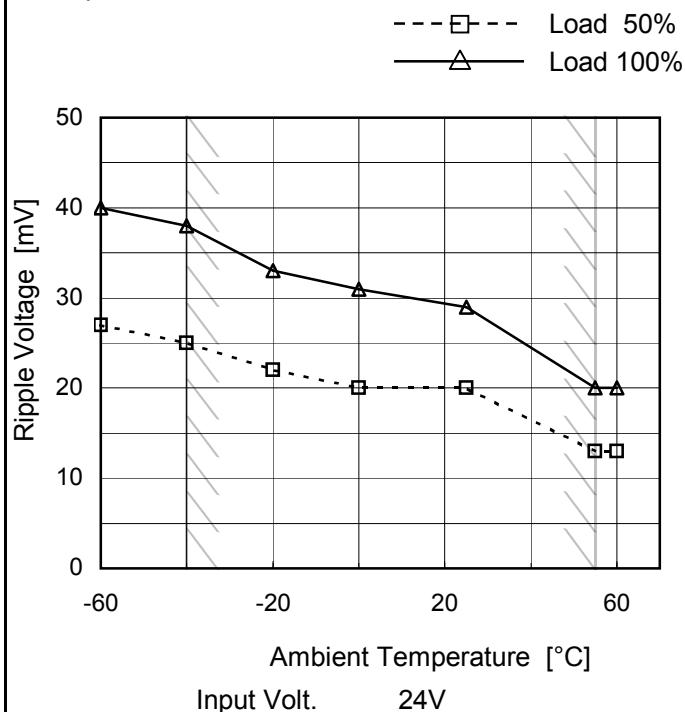


Fig.Complex Ripple Noise Wave Form

Model	SUTS102405
Item	Ripple Voltage (by Ambient Temp.)
Object	+5V2A

1. Graph



Measured by 150 MHz Oscilloscope.

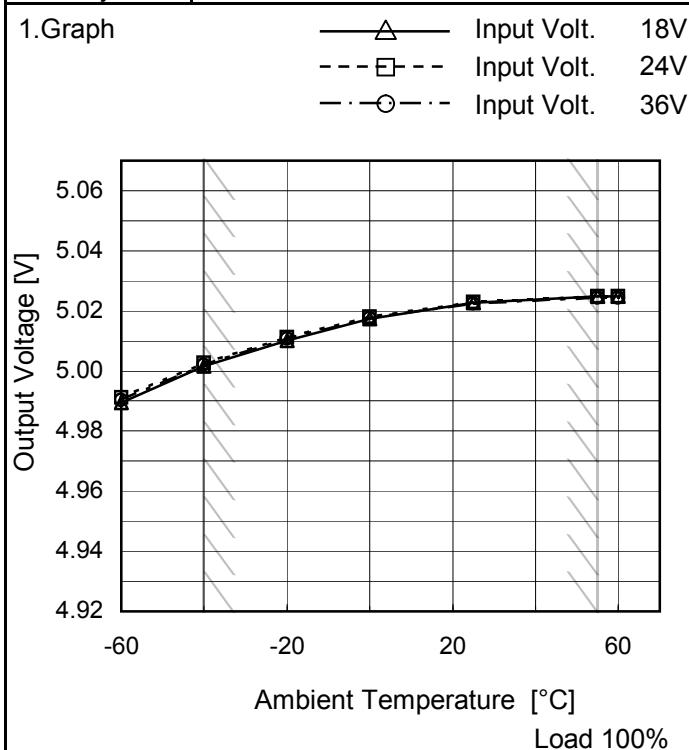
Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure B

2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	27	40
-40	25	38
-20	22	33
0	20	31
25	20	29
55	13	20
60	13	20
--	-	-
--	-	-
--	-	-
--	-	-

Model	SUTS102405
Item	Ambient Temperature Drift
Object	+5V2A



Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
-60	4.989	4.991	4.990
-40	5.002	5.003	5.002
-20	5.010	5.011	5.011
0	5.017	5.018	5.018
25	5.023	5.023	5.023
55	5.025	5.025	5.024
60	5.025	5.025	5.024
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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



Model	SUTS102405	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 : 18 - 36V

Load Current : 0 - 2A

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

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

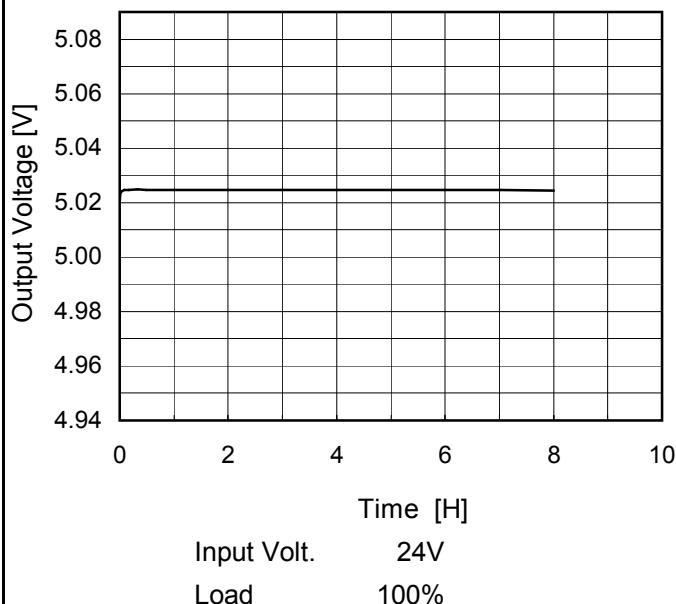
2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	36	0	5.044	±21	±0.4
Minimum Voltage	-40	18	2	5.002		

COSEL

Model	SUTS102405
Item	Time Lapse Drift
Object	+5V2A

1. Graph



Temperature 25°C
Testing Circuitry Figure A

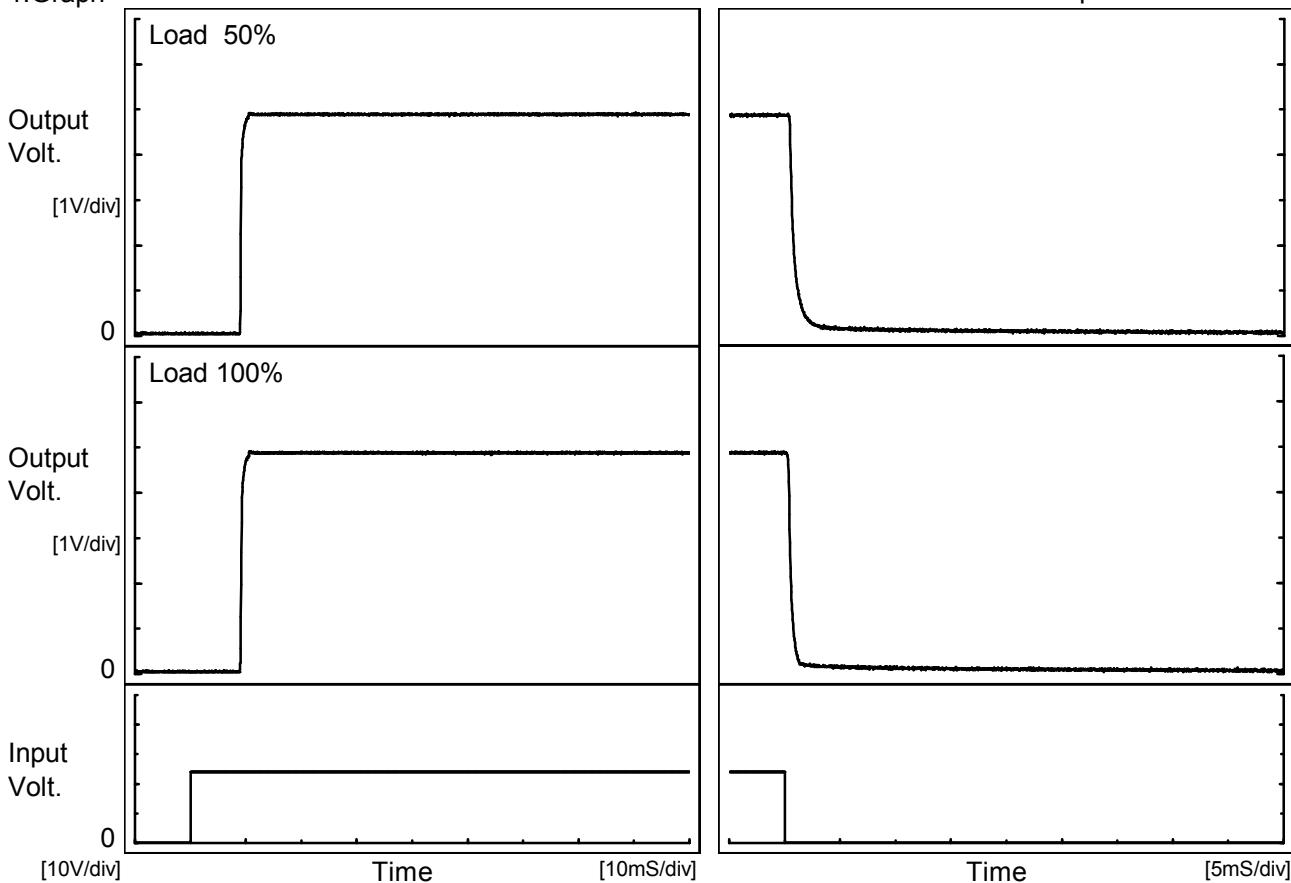
2. Values

Time since start [H]	Output Voltage [V]
0.0	5.020
0.5	5.025
1.0	5.025
2.0	5.025
3.0	5.025
4.0	5.025
5.0	5.025
6.0	5.025
7.0	5.025
8.0	5.025

COSEL

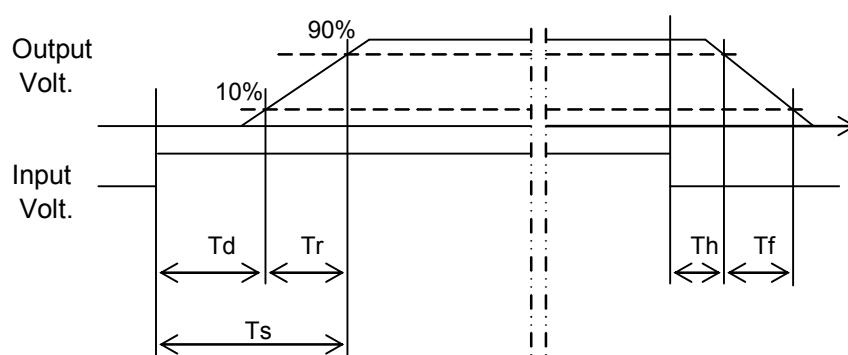
Model	SUTS102405	Temperature Testing Circuitry 25°C Figure A
Item	Rise and Fall Time	
Object	+5V2A	

1. Graph



2. Values

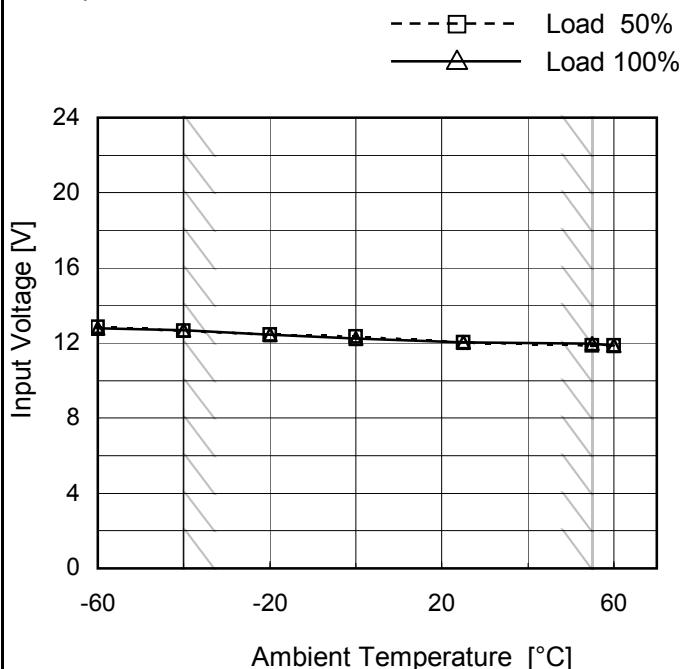
Load	Time	Td	Tr	Ts	Th	Tf	[mS]
50 %		9.0	0.7	9.7	0.4	1.2	
100 %		9.1	0.7	9.8	0.3	0.7	



Model	SUTS102405
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+5V2A

Testing Circuitry Figure A

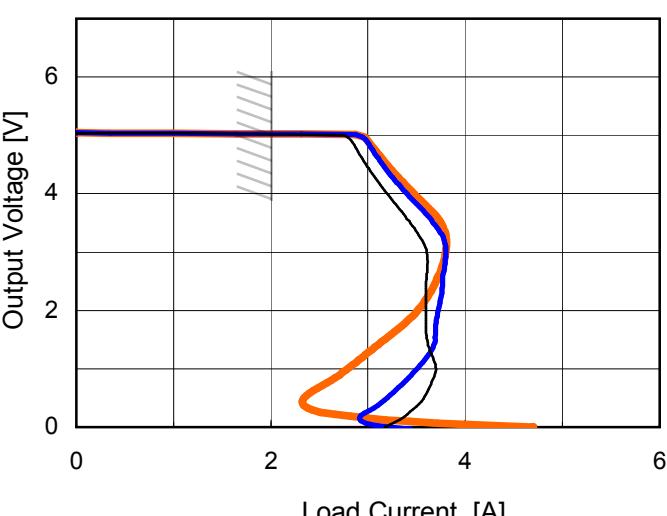
1. Graph



2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	12.9	12.8
-40	12.7	12.7
-20	12.5	12.5
0	12.4	12.3
25	12.1	12.1
55	11.9	12.0
60	11.9	11.9
--	-	-
--	-	-
--	-	-
--	-	-

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

Model	SUTS102405	Temperature Testing Circuitry 25°C Figure A																																																							
Item	Overshoot Protection																																																								
Object	+5V2A																																																								
1.Graph	<p>— Input Volt. 18V — Input Volt. 24V — Input Volt. 36V</p>  <p>Note: Slanted line shows the range of the rated load current.</p>	2.Values																																																							
		<table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th colspan="3">Load Current [A]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>5.00</td><td>2.33</td><td>2.32</td><td>2.31</td></tr> <tr><td>4.75</td><td>2.88</td><td>3.04</td><td>3.06</td></tr> <tr><td>4.50</td><td>2.98</td><td>3.14</td><td>3.18</td></tr> <tr><td>4.00</td><td>3.19</td><td>3.38</td><td>3.45</td></tr> <tr><td>3.50</td><td>3.42</td><td>3.67</td><td>3.75</td></tr> <tr><td>3.00</td><td>3.60</td><td>3.80</td><td>3.80</td></tr> <tr><td>2.50</td><td>3.60</td><td>3.77</td><td>3.71</td></tr> <tr><td>2.00</td><td>3.60</td><td>3.73</td><td>3.53</td></tr> <tr><td>1.50</td><td>3.60</td><td>3.69</td><td>3.17</td></tr> <tr><td>1.00</td><td>3.70</td><td>3.52</td><td>2.81</td></tr> <tr><td>0.50</td><td>3.58</td><td>3.20</td><td>2.37</td></tr> <tr><td>0.00</td><td>3.18</td><td>3.42</td><td>4.69</td></tr> </tbody> </table>	Output Voltage [V]	Load Current [A]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	5.00	2.33	2.32	2.31	4.75	2.88	3.04	3.06	4.50	2.98	3.14	3.18	4.00	3.19	3.38	3.45	3.50	3.42	3.67	3.75	3.00	3.60	3.80	3.80	2.50	3.60	3.77	3.71	2.00	3.60	3.73	3.53	1.50	3.60	3.69	3.17	1.00	3.70	3.52	2.81	0.50	3.58	3.20	2.37	0.00	3.18	3.42	4.69
Output Voltage [V]	Load Current [A]																																																								
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																						
5.00	2.33	2.32	2.31																																																						
4.75	2.88	3.04	3.06																																																						
4.50	2.98	3.14	3.18																																																						
4.00	3.19	3.38	3.45																																																						
3.50	3.42	3.67	3.75																																																						
3.00	3.60	3.80	3.80																																																						
2.50	3.60	3.77	3.71																																																						
2.00	3.60	3.73	3.53																																																						
1.50	3.60	3.69	3.17																																																						
1.00	3.70	3.52	2.81																																																						
0.50	3.58	3.20	2.37																																																						
0.00	3.18	3.42	4.69																																																						

coSEL

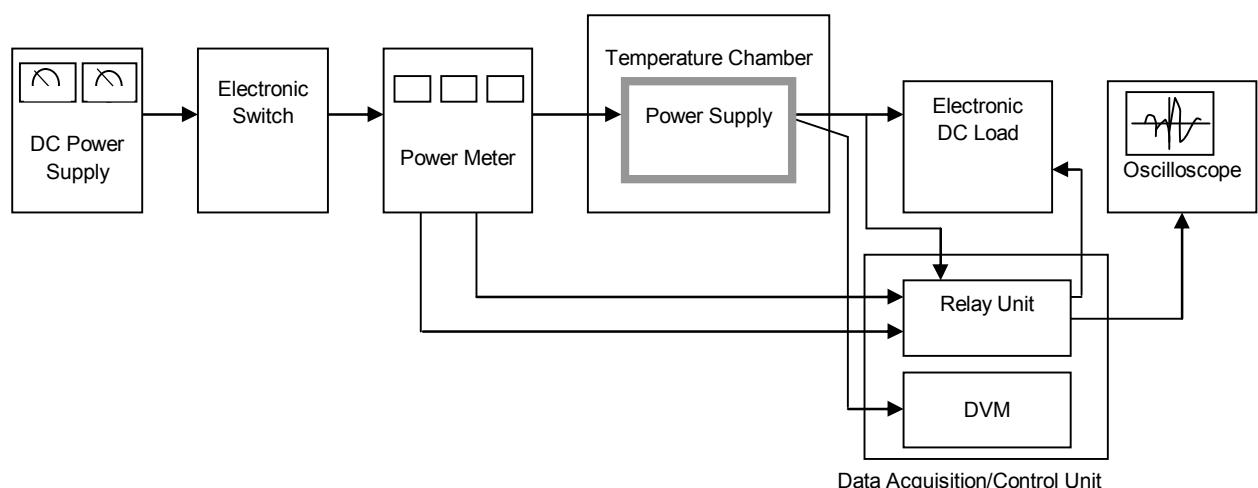


Figure A

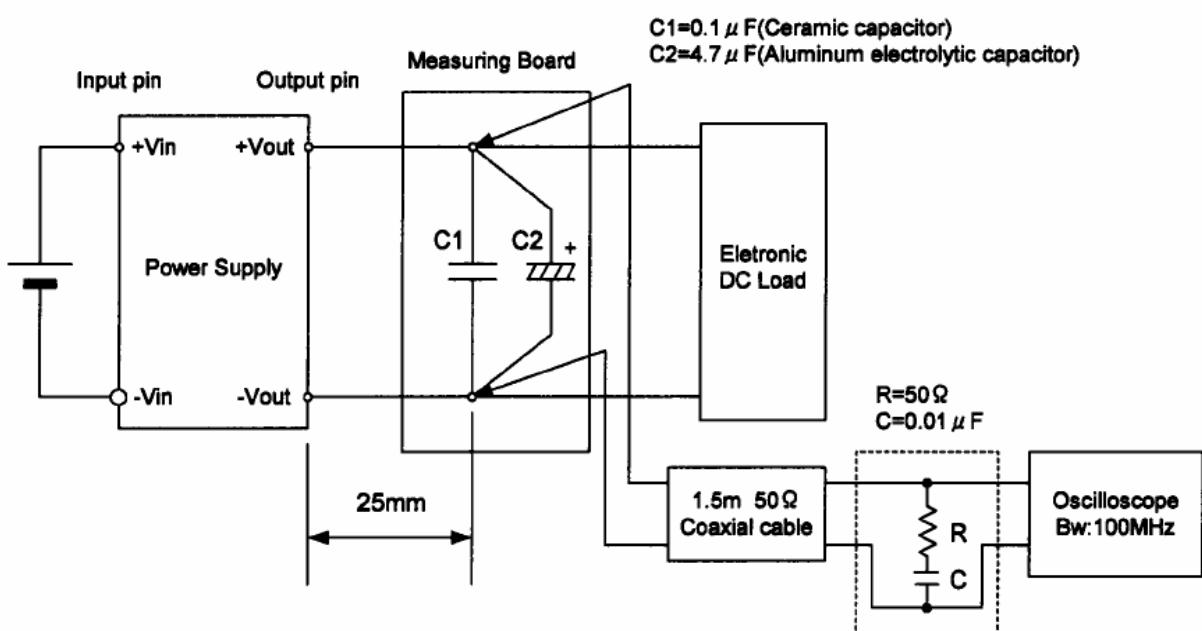


Figure B (Ripple and Ripple noise Characteristic)