

TEST DATA OF SUW61215 SUCW61215

Regulated DC Power Supply
Feb 24, 2005

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Tetsuo Sugimori Design Manager

Prepared by : Yoshikazu Mizuno
Yoshikazu Mizuno Design Engineer

COSEL CO.,LTD.

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Model		SUW61215/SUCW61215		Temperature	25°C																																																																							
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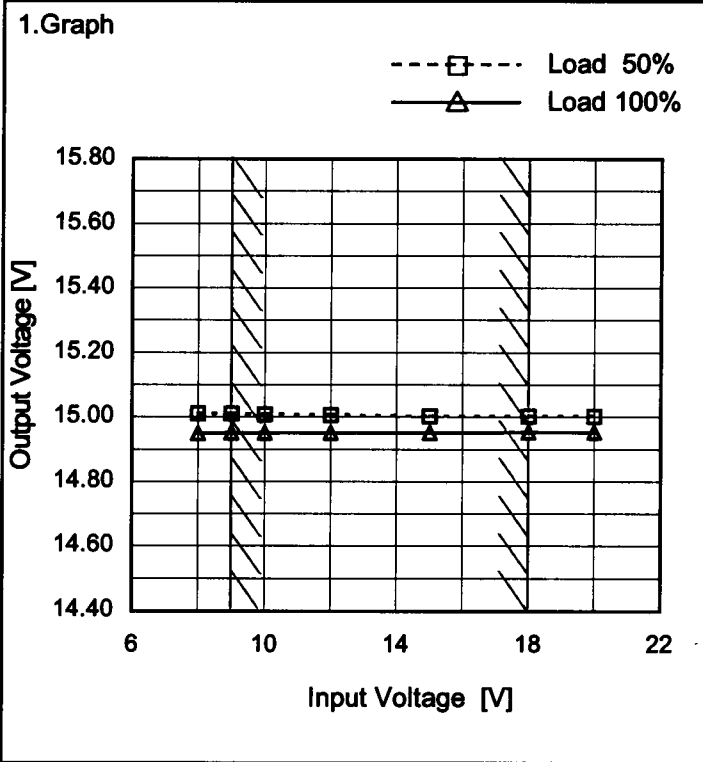


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Model	SUW61215/SUCW61215
Item	Line Regulation
Object	+15V0.2A

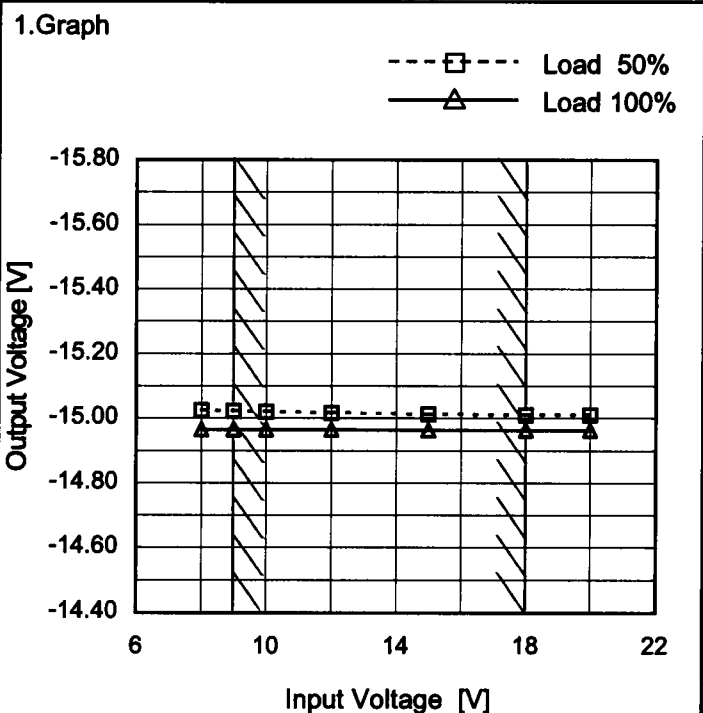
Temperature 25°C
Testing Circuitry Figure A



2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
8	15.011	14.949
9	15.010	14.950
10	15.008	14.951
12	15.006	14.951
15	15.003	14.952
18	15.002	14.952
20	15.002	14.952
--	-	-
--	-	-

Object	-15V0.2A
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2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
8	-15.024	-14.965
9	-15.022	-14.965
10	-15.020	-14.964
12	-15.016	-14.964
15	-15.013	-14.963
18	-15.011	-14.962
20	-15.010	-14.962
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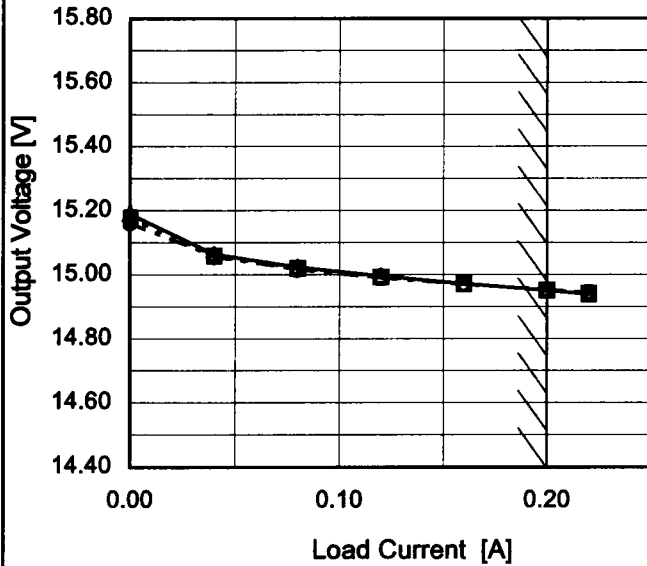
Note: Slanted line shows the range of the rated input voltage.



Model	SUW61215/SUCW61215
Item	Load Regulation
Object	+15V0.2A

Temperature 25°C
Testing Circuitry Figure A

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

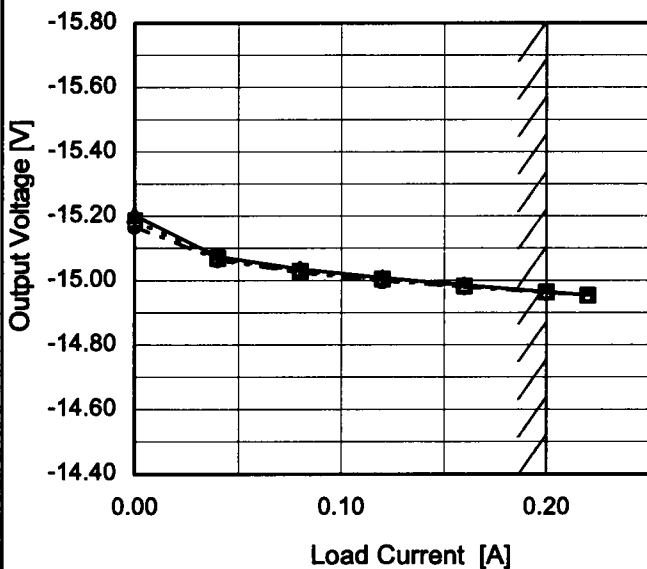


2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	15.190	15.178	15.162
0.04	15.064	15.059	15.056
0.08	15.024	15.020	15.016
0.12	14.996	14.993	14.990
0.16	14.972	14.971	14.970
0.20	14.950	14.951	14.952
0.22	14.939	14.942	14.944
--	-	-	-
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--	-	-	-
--	-	-	-

Object	-15V0.2A
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1.Graph
 —△— Input Volt. 9V
 - - - □ - - - Input Volt. 12V
 - · - ○ - · - - Input Volt. 18V



2.Values

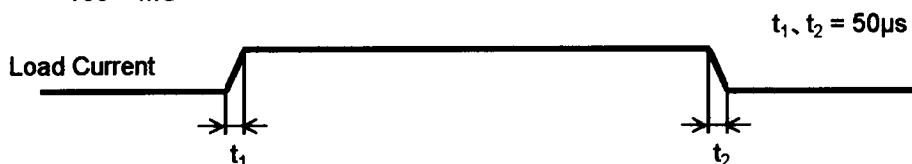
Load Current [A]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	-15.203	-15.188	-15.169
0.04	-15.074	-15.070	-15.065
0.08	-15.035	-15.030	-15.024
0.12	-15.008	-15.004	-14.999
0.16	-14.986	-14.983	-14.980
0.20	-14.965	-14.964	-14.962
0.22	-14.955	-14.954	-14.954
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Note: Slanted line shows the range of the rated load current.

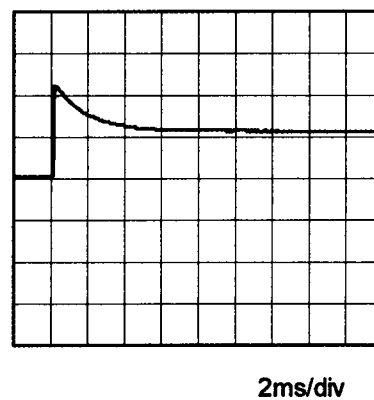
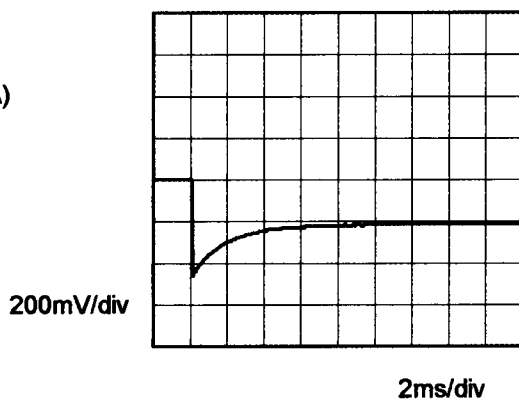


Model		SUW61215/SUCW61215	
Item		Dynamic Load Response	
Object		+15V0.2A	
		Temperature	25°C
		Testing Circuitry	Figure A

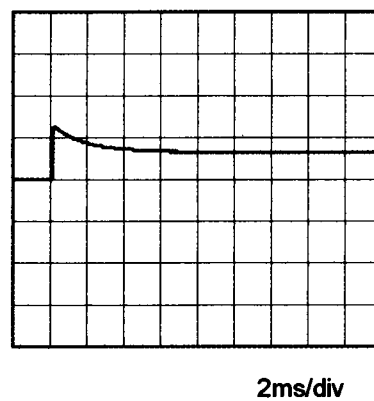
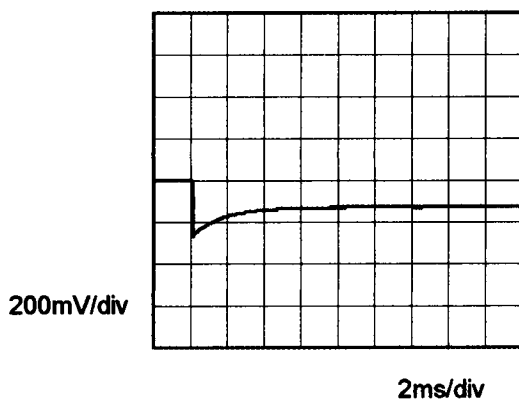
Input Volt. 12 V
 Cycle 100 mS



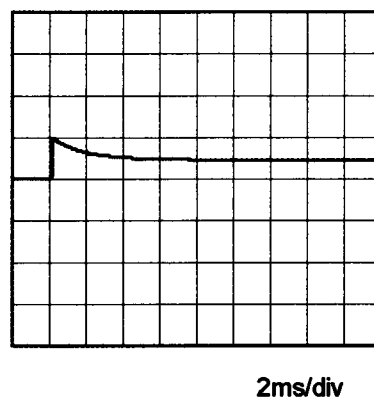
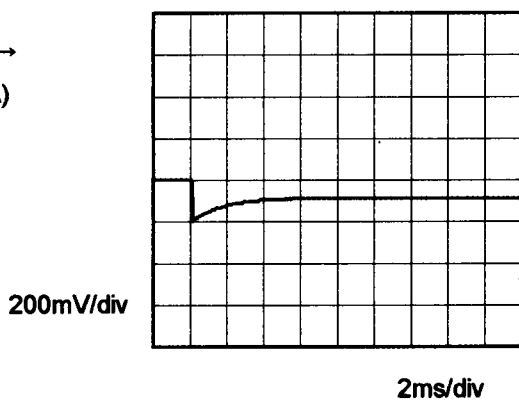
Min. Load (0A) ←→
 Load 100% (0.2A)



Min. Load (0A) ←→
 Load 50% (0.1A)



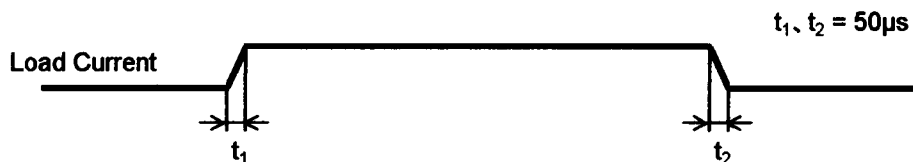
Load 50% (0.1A) ←→
 Load 100% (0.2A)



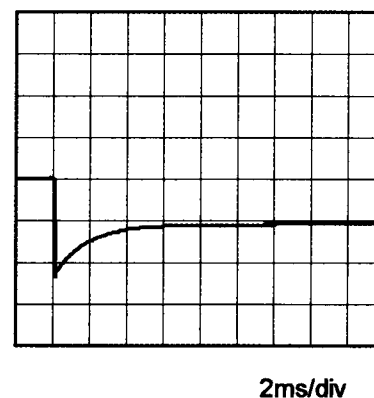
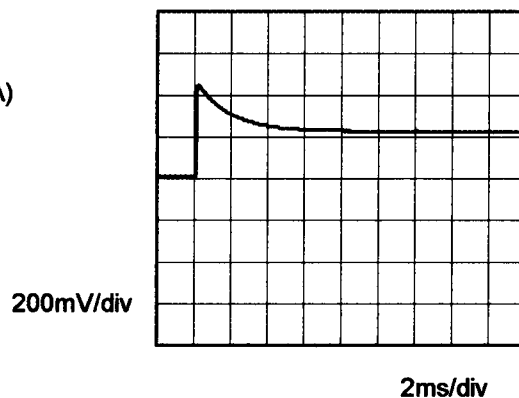


Model		SUW61215/SUCW61215	
Item		Dynamic Load Response	
Object		-15V0.2A	
		Temperature	25°C
		Testing Circuitry	Figure A

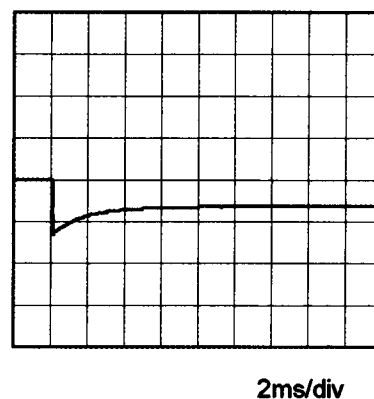
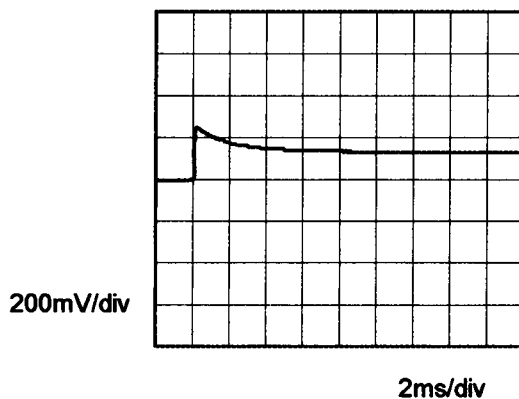
Input Volt. 12 V
Cycle 100 mS



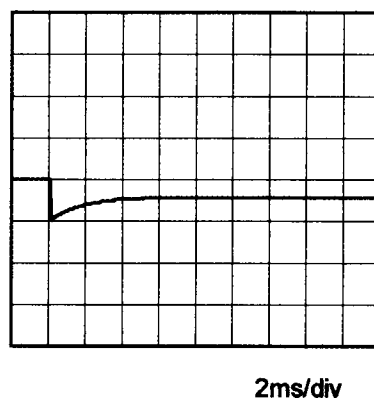
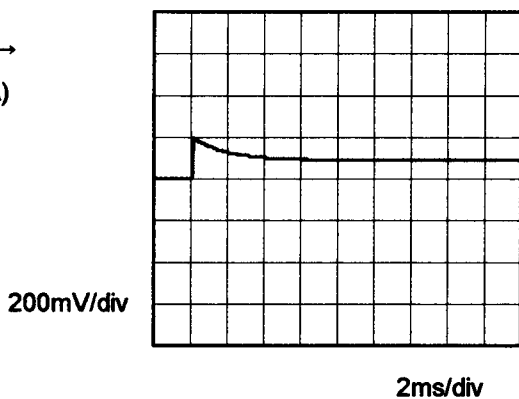
Min. Load (0A) ←→
Load 100% (0.2A)



Min. Load (0A) ←→
Load 50% (0.1A)



Load 50% (0.1A) ←→
Load 100% (0.2A)





<p>Model SUW61215/SUCW61215</p>		<p>Temperature 25°C Testing Circuitry Figure B</p>																																						
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COSEL		Testing Circuitry Figure A
Model	SUW61215/SUCW61215	
Item	Output Voltage Accuracy	

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 (AVR 1) : 0 - 0.2A (AVR 2): 0 - 0.2A

* Other Output : Rated Load

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

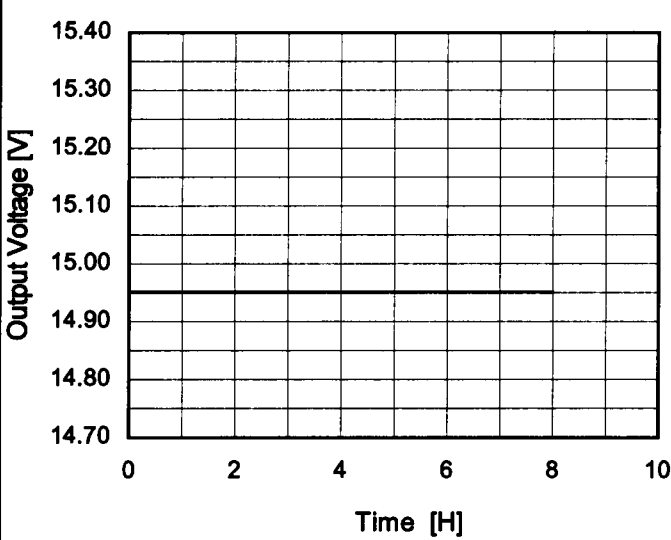
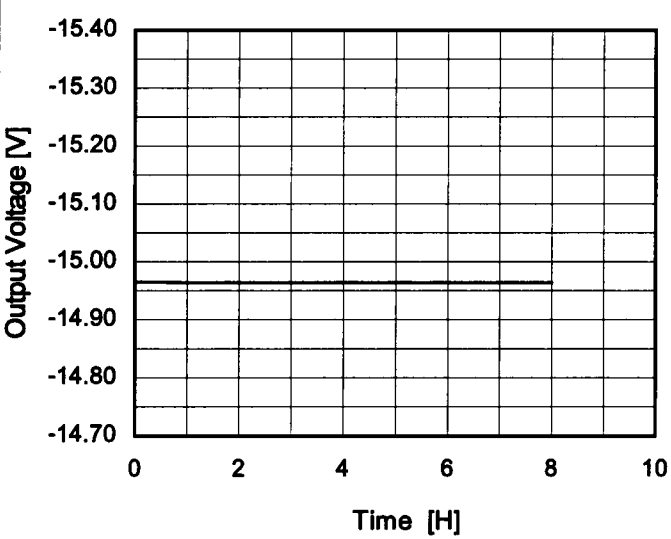
* Output Voltage Accuracy (Ration) = $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

2. Values

Object		+15V0.2A		Output		Output Voltage Accuracy	
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy		
			Current[A]	Voltage[V]	Value [mV]	Ration [%]	
Maximum Voltage	55	9	0	15.190	±131	±0.9	
Minimum Voltage	-40	9	0.2	14.929			

Object		-15V0.2A		Output		Output Voltage Accuracy	
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy		
			Current[A]	Voltage[V]	Value [mV]	Ration [%]	
Maximum Voltage	55	9	0	-15.204	±132	±0.9	
Minimum Voltage	-40	18	0.2	-14.940			



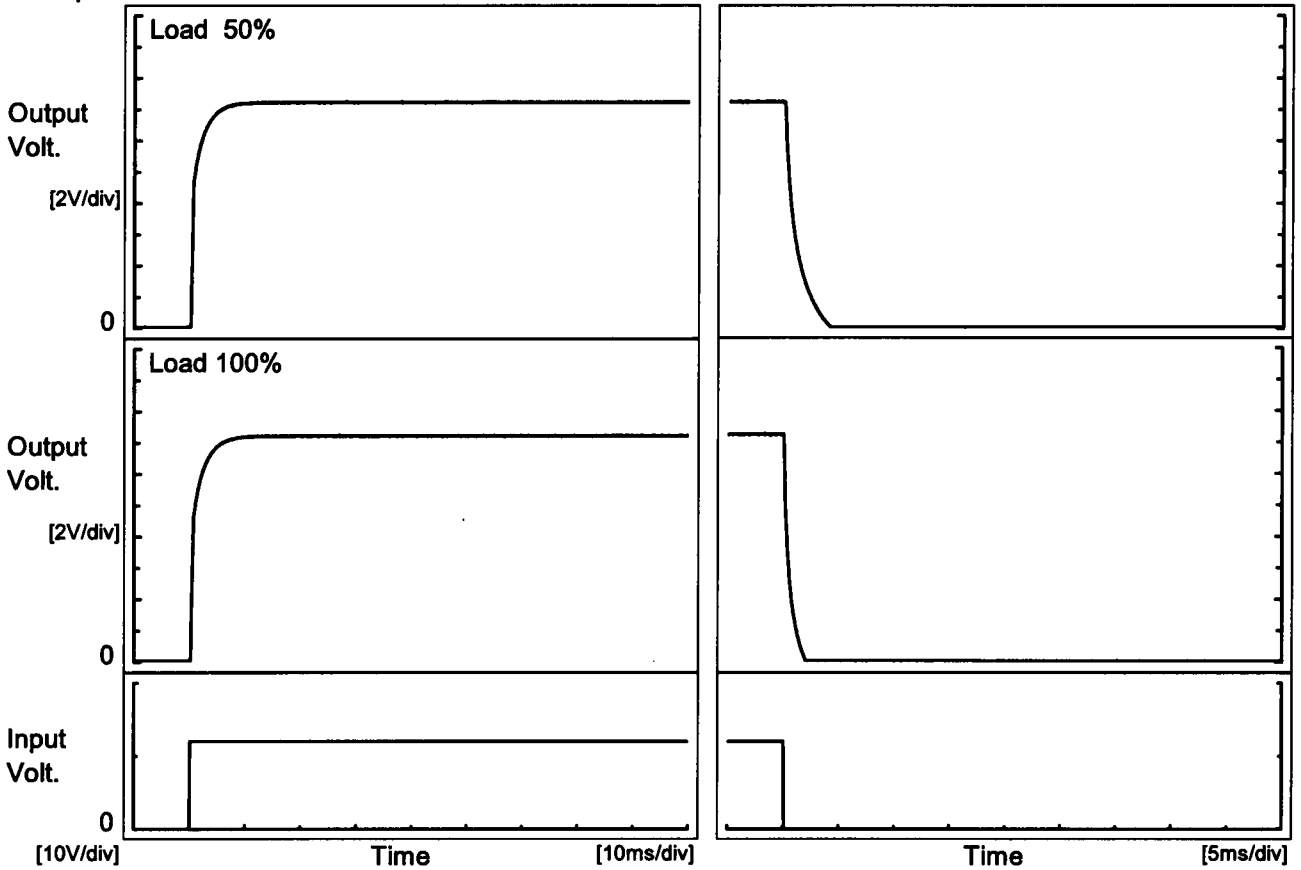
Model		SUW61215/SUCW61215		Temperature 25°C Testing Circuitry Figure A																						
Item		Time Lapse Drift																								
Object		+15V0.2A																								
1.Graph  <p style="text-align: center;">Time [H]</p> <p style="text-align: center;">Input Volt. 12V Load 100%</p>		2.Values <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Time since start [H]</th> <th style="text-align: center;">Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">0.0</td><td style="text-align: center;">14.952</td></tr> <tr><td style="text-align: center;">0.5</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">1.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">2.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">3.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">4.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">5.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">6.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">7.0</td><td style="text-align: center;">14.951</td></tr> <tr><td style="text-align: center;">8.0</td><td style="text-align: center;">14.951</td></tr> </tbody> </table>			Time since start [H]	Output Voltage [V]	0.0	14.952	0.5	14.951	1.0	14.951	2.0	14.951	3.0	14.951	4.0	14.951	5.0	14.951	6.0	14.951	7.0	14.951	8.0	14.951
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Model	SUW61215/SUCW61215	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+15V0.2A		

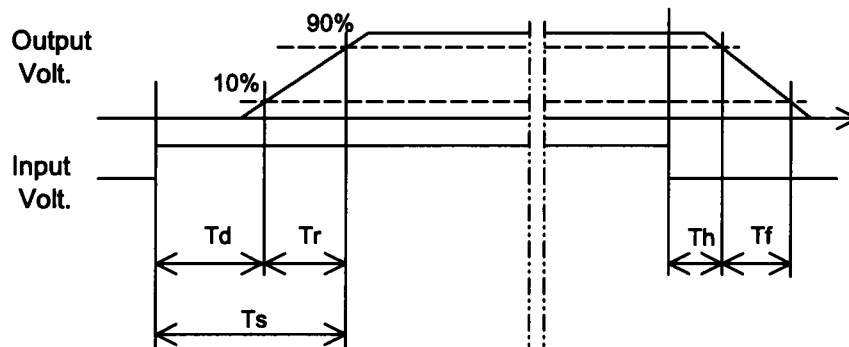
1. Graph

Input Volt. 12 V



2. Values

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	4.1	4.4	0.1	2.6
100 %	0.3	4.2	4.5	0.1	1.3

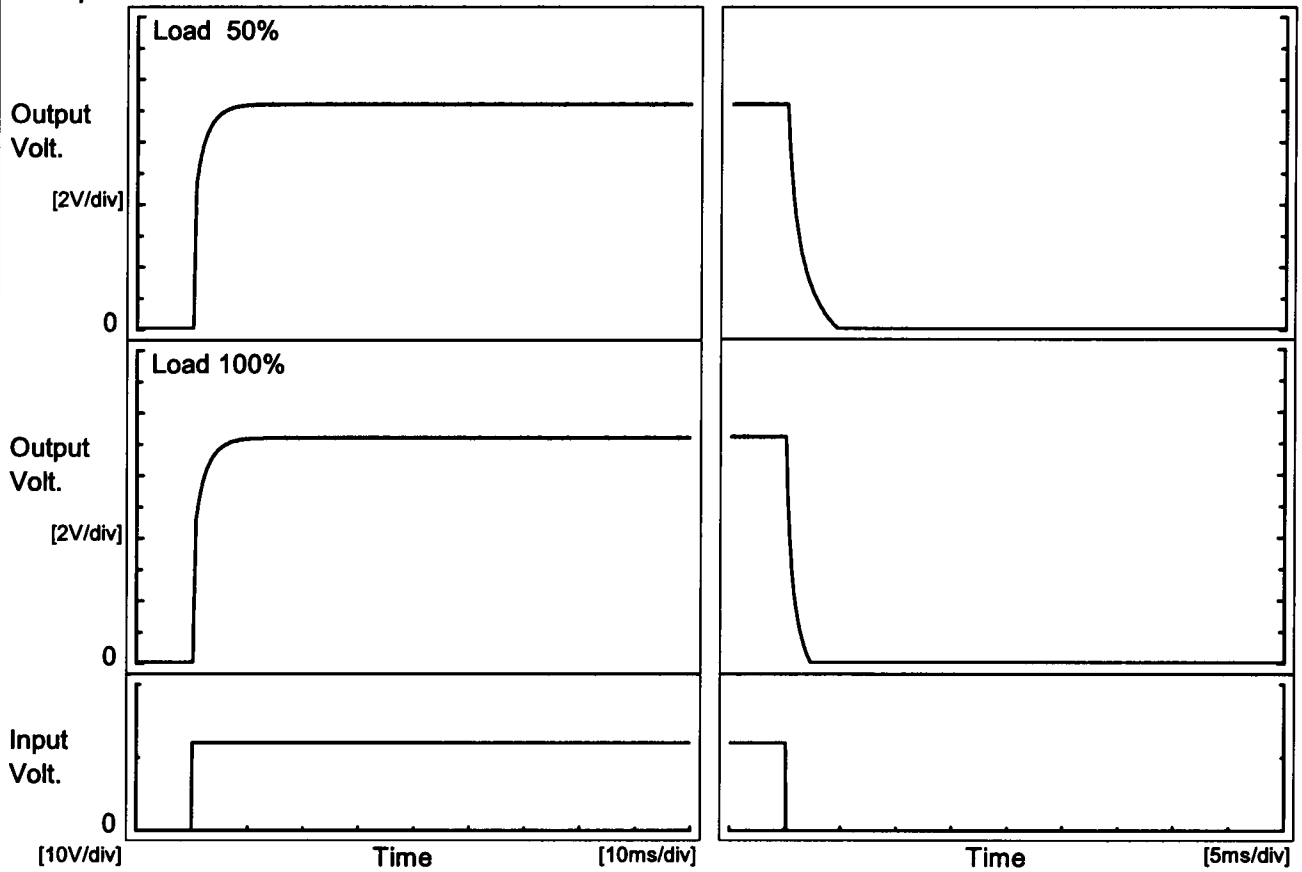




Model	SUW61215/SUCW61215	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	-15V0.2A		

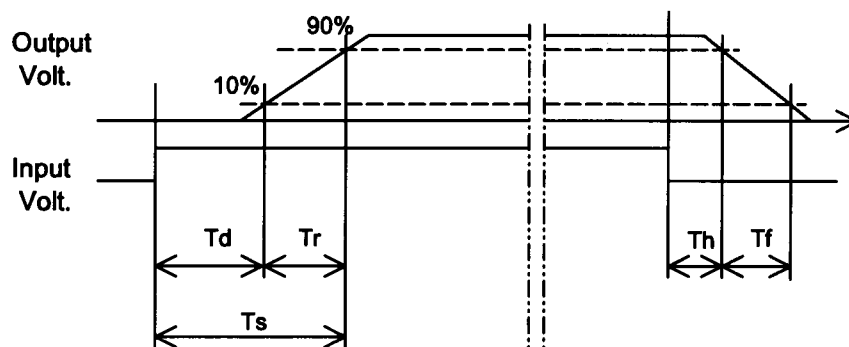
1. Graph

Input Volt. 12 V



2. Values

Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.3	4.2	4.5	0.1	3.0
100 %		0.3	4.3	4.6	0.1	1.5





Model SUW61215/SUCW61215		Testing Circuitry Figure A																																					
Item Minimum Input Voltage for Regulated Output Voltage																																							
Object +15V0.2A																																							
<p>1.Graph</p> <div style="text-align: right; margin-bottom: 5px;"> ---□--- Load 50% —△— Load 100% </div> <p style="text-align: center;">Ambient Temperature [°C]</p>	<p>2.Values</p> <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Input Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-60</td><td>8.1</td><td>8.1</td></tr> <tr><td>-40</td><td>7.9</td><td>8.1</td></tr> <tr><td>-20</td><td>7.9</td><td>7.9</td></tr> <tr><td>0</td><td>7.9</td><td>7.9</td></tr> <tr><td>25</td><td>7.7</td><td>7.7</td></tr> <tr><td>55</td><td>7.4</td><td>7.5</td></tr> <tr><td>60</td><td>7.5</td><td>7.5</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> </tbody> </table>	Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-60	8.1	8.1	-40	7.9	8.1	-20	7.9	7.9	0	7.9	7.9	25	7.7	7.7	55	7.4	7.5	60	7.5	7.5	--	-	-	--	-	-	--	-	-	--	-	-
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Model		SUW61215/SUCW61215		Temperature		25°C																																																								
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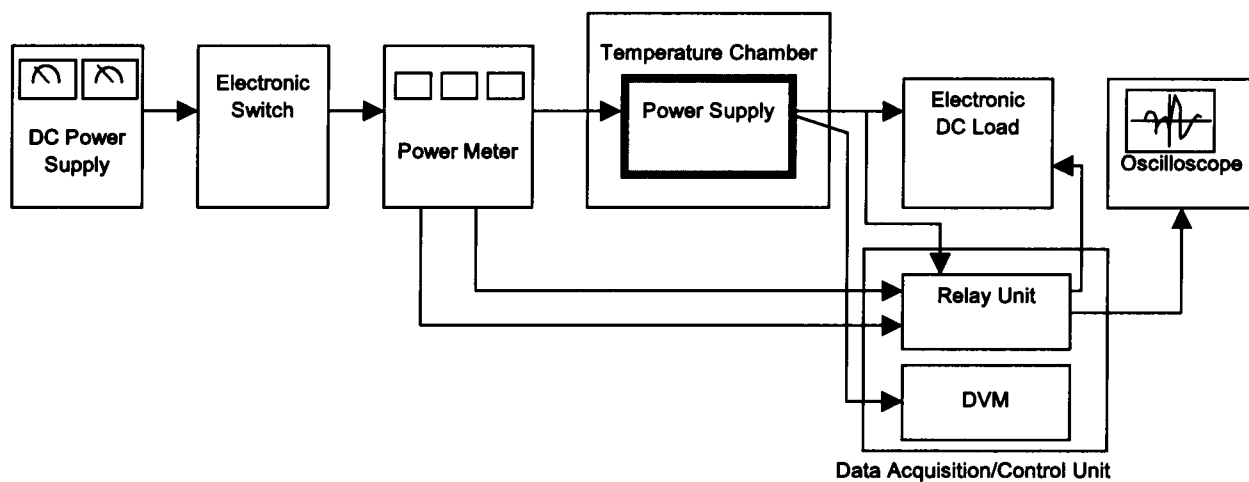


Figure A

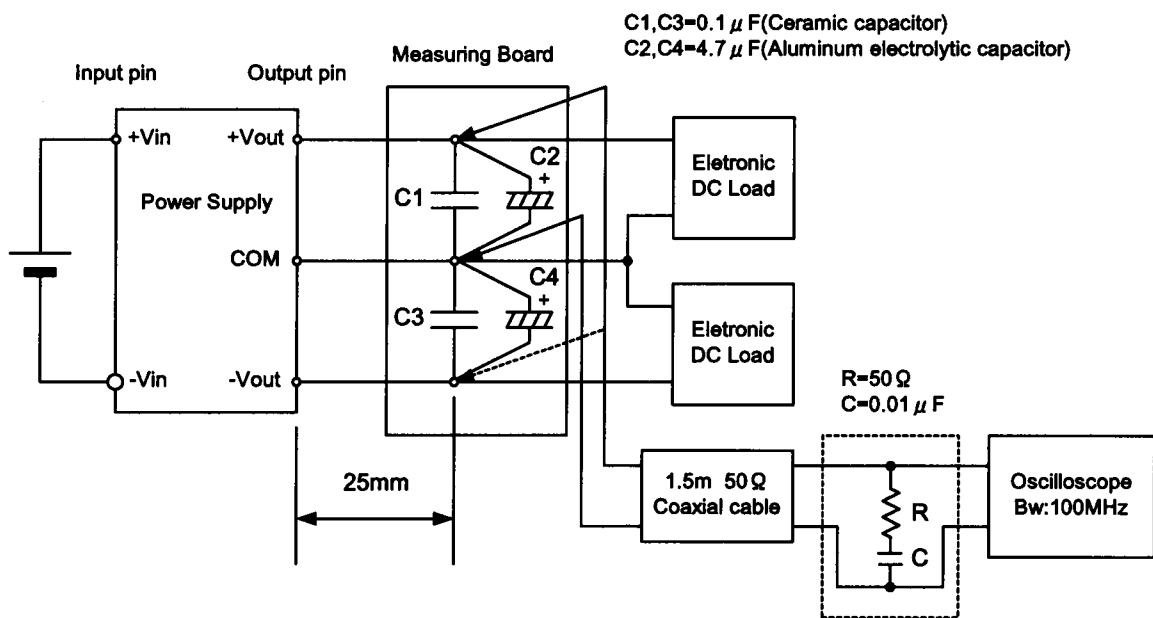


Figure B (Ripple and Ripple noise Characteristic)